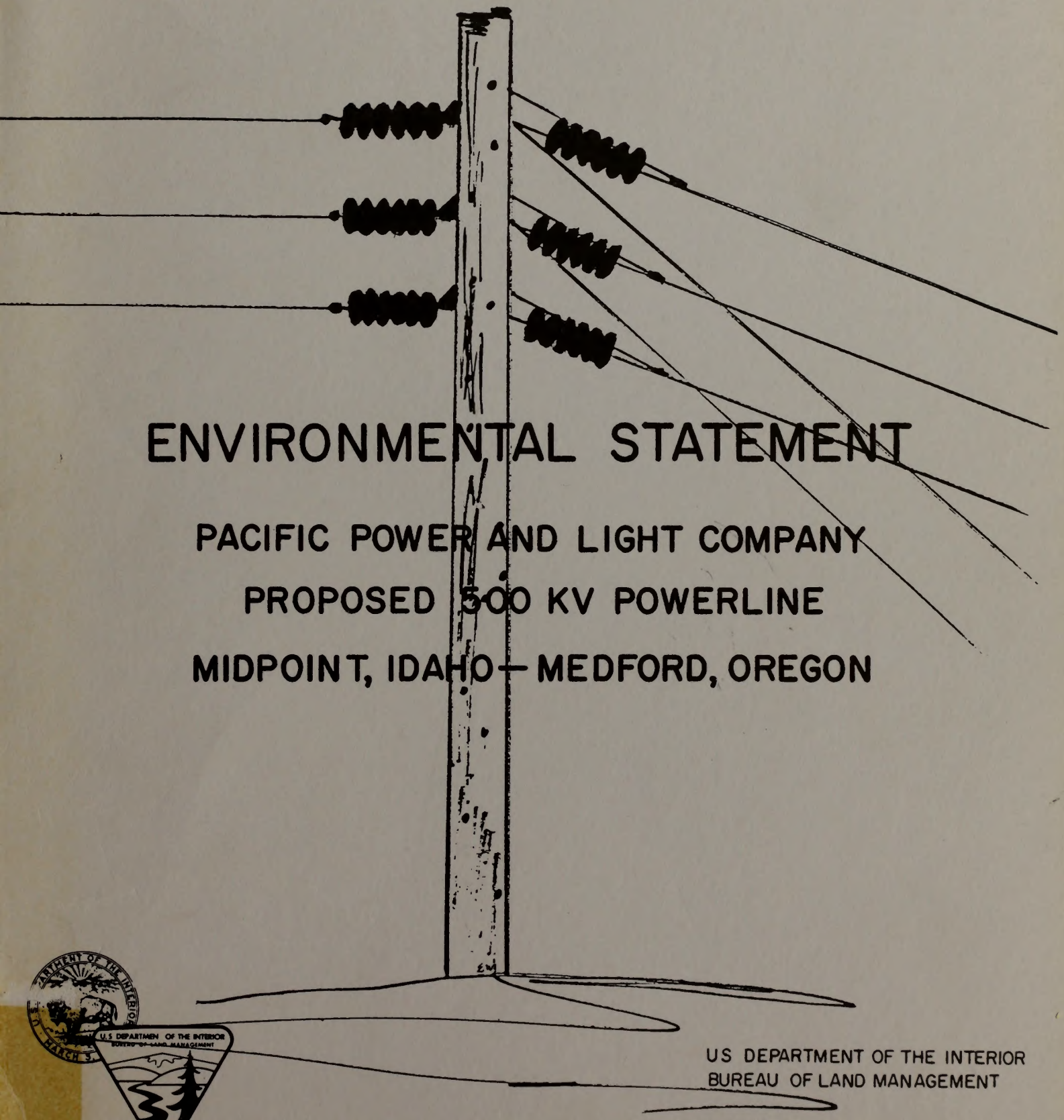
FINAL



ENVIRONMENTAL STATEMENT

PACIFIC POWER AND LIGHT COMPANY

PROPOSED 500 KV POWERLINE

MIDPOINT, IDAHO – MEDFORD, OREGON

US DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center

BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047
88054833
BUREAU OF LAND MANAGEMENT
Library
Denver Service Center
TD
195
.E37
M52
1977
v.2

CHAPTER IX

CONSULTATION AND COORDINATION

On April 8, 1975 a letter, outlining Pacific's proposed route and several alternate routes, requesting input into the drafting process to insure that the draft statement would reflect the full range of environmental and human considerations was sent to 12 Federal agencies, 17 State agencies in both Idaho and Oregon, 51 organizations and conservation groups, and to 22 companies and individuals.

During the course of field work, and while preparing the draft statement, numerous contacts were made with specific Federal, State, and local agencies and various groups and individuals.

Federal Contacts

Bonneville Power Administration, Office of the Administrator, Portland, Oregon.

Close coordniation was maintained with Bonneville Power Administration throughout the entire statement drafting period. Input was received from Bonneville for major portions of the statement.

Bureau of Outdoor Recreation, Northwest Region, Seattle, Washington

The Bureau of Outdoor Recreation provided input into the statement regarding the Wild and Scenic Rivers Act and the National Trails System Act, especially as to the Owyhee River and the Oregon Trail.

Corps of Engineers, North Pacific Division, Portland, Oregon

The Corps of Engineers was consulted relative to any Department of the Army permits that may be needed by Pacific Power & Light Company.

Federal Aviation Administration, Northwest Region, Seattle, Washington

The Federal Aviation Administration, Northwest Region, was consulted relative to the proximity and effect that a powerline on the proposed or alternate routes would have on VOR installations.

Fish and Wildlife Service, Regional Office, Portland, Oregon

In conformance with the Fish and Wildlife Coordination Act, Endangered Species Act, etc., the Fish and Wildlife Service was consulted in preparing this statement. Fish and Wildlife Service personnel from the Regional Office in Portland, Oregon and the Hart Mountain, Klamath and Malheur Refuges were consulted as to the wildlife populations, habitat areas, flight patterns, endangered species, relationship of power line routing to wildlife and wildlife refuges, and other wildlife relationships.

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center

National Park Service, Pacific Northwest Region, Seattle, Washington

The National Park Service provided information for development of the esthetics and recreation portions of the statement, especially as to the Hagerman Fossil Beds in Idaho.

State and Local Contacts

In compliance with the National Historic Preservation Act, Dr. Merle Wells, Idaho State Historical Preservation Officer and Paul Hartwig, Oregon State Historical Preservation Officer were contacted, especially for information on sites eligible, or on, the National Register of Historic Places. The document was also sent to the President's Council on Historic Preservation in compliance with Section 106 of the Historic Preservation Act and Section 2 (b) of Executive Order 11593.

The Idaho Department of Fish and Game and the Oregon Department of Fish and Wildlife were consulted as to wildlife populations and ranges, critical wildlife areas, endangered species, and possible effects of a 500 Kv transmission line on wildlife. Personal contacts were made with personnel of the two agencies in Boise and Shoshone, Idaho and Portland, Burns, Lakeview and Medford, Oregon.

The Department of Lands, State of Idaho and the Oregon Division of State Lands were consulted as to state requirements on state-owned lands that may be crossed by the transmission line.

Information incorporated into the socioeconomic sections of the statement was received from the Idaho Tax Commission and the Idaho Department of Employment, Division of Budget and Policy Planning. The same type of information was obtained from the House Revenue Committee, State of Oregon.

Other Contacts

In addition to the contacts made by letter of April 8, 1975, numerous contacts were made with groups and individuals, including the Oregon Historical Society, Oregon Wildlife Federation, National Wildlife Federation, the Warner Valley Committee, Tundra Films, Sierra Club, Idaho Tax Payers Association, University of Oregon, Oregon State University, College of Idaho and students and other individuals. Various viewpoints were expressed and information provided relative to different aspects of the proposed project.

COORDINATION IN REVIEW OF DRAFT STATEMENT

Comments on the draft environmental impact statement were requested from:

Federal Agencies

Advisory Council on Historic Preservation*

Department Agriculture
- Forest Service*
- Soil Conservation Service*

Department of Defense
- Corps of Engineers
- Mountain Home Air Force Base

Environmental Protection Agency*

Federal Power Commission*

Department of the Interior
- Bonneville Power Administration*
- Bureau of Mines*
- Bureau of Reclamation
- Bureau of Outdoor Recreation*
- National Park Service*
- U.S. Fish & Wildlife Service*

Department of Transportation
- Federal Aviation Administration

Water Resources Council

State and Local Government

Idaho State Clearing House*
Idaho State Historic Preservation Officer*

Idaho Public Utilities Commission

Oregon State Clearing House*
Oregon State Historic Preservation Officer*

Oregon Public Utilities Commissioner*

Boards of County Commissioners
- Ada County, Idaho
- Canyon County, Idaho
- Elmore County, Idaho
- Gooding County, Idaho
- Jerome County, Idaho
- Twin Falls, Idaho
- Harney County, Oregon

* Agencies and organizations which prepared written responses to this draft statement.

Jackson County, Oregon
Klamath County, Oregon
Lake County, Oregon
Malheur County, Oregon

Interest Groups

Ada County Fish & Game League
Auduban Society
Desert Trail Association
Friends of the Earth*
Idaho Environmental Council
Idaho Historical Society*
Idaho Wildlife Federation
International Society for Preservation of Mustangs and Burros
Izaak Walton League
League of Women Voters*
National Wildlife Federation
Nature Conservancy
Oregon Environmental Council*
Oregon High Desert Study Group
Oregon Wildlife Federation
Sierra Club*
Wildlife Management Institute*
Other Groups and Individuals

Public Comments and Responses

The notice of availability of the draft statement was published in the August 24, 1976 issue of the Federal Register on page 35737. The notice also announced a 45-day public review and comment period. It also included a schedule of formal public hearings on the draft statement to be held at four locations. After publication of the notice of availability over 400 copies of the draft statement were mailed to Federal, State, local government agencies and nongovernment organizations, such as conservation groups for their review and comment.

Reading copies were made available for public review at nine state and district offices of the Bureau of Land Management in Idaho and Oregon and the Office of Information, Bureau of Land Management, Washington, D. C. It was also available for public review at the Fremont National Forest, Lakeview, Oregon. Copies were also placed in public libraries in Portland, Medford, Ashland, Klamath Falls, Lakeview, Burns, Vale, and Ontario, Oregon and Boise and Twin Falls, Idaho.

In addition, a news release was made on August 20, 1976 from the Oregon State Office, Bureau of Land Management, to 47 newspapers, 38 radio stations, 18 television stations, two news services, and 193 agencies and special interest groups within Idaho and Oregon.

* Agencies and organizations which prepared written responses to this draft statement.

Public Hearings

The Department of the Interior held four public hearings on the adequacy of the Draft Statement on September 27, 29, 30, and October 6, 1976. An Interior Department Administrative Law Judge presided over the hearings which were recorded verbatim by a professional court reporter. Copies of the full hearings' transcripts were made available for public review in Bureau of Land Management State Offices in Portland, Oregon and Boise, Idaho. The hearings were widely announced as indicated in the public comments section.

The following summarizes the hearing locations, dates attendance, and number of people who gave testimony:

Location	Date and Time	Attendance	Number Testifying
Medford, Ore	Sept. 27 - 9 a.m.	17	10
Lakeview, Ore	Sept. 29 - 9 a.m.	22	17
Klamath Falls, Ore	Sept. 30 - 9 a.m.	42	34
Boise, Ida	Oct. 6 - 9 a.m.	17	8

Handling and Review Procedures for Public Comments

Due to widespread public awareness, the Oregon State Director, Bureau of Land Management received many comments on the draft environmental statement. Oral testimony was received at formal hearings; written comments were received from Federal and State agencies, private organizations and individuals.

Copies of all written comments and the hearing transcripts are available for public review at the State Director's Office, Bureau of Land Management, 729 N.E. Oregon, Street, Portland, Oregon.

All comments were reviewed and considered. Comments which presented new data, questioned facts and/or analyses, or raised questions or issues bearing directly upon the environmental effects of the proposed action and alternatives were used in revising the text or were responded to separately.

Comments and Responses

Each person who testified at the hearings and each person, organization, or agency that provided written comments were assigned an index number. Substantive comments from the hearings and written submissions are listed by related section (e.g., Vegetation, Wildlife) with the index number following the reference to the comment. Similar comments

received from more than one source have several index numbers identifying the source.

Changes incorporated into the final statement are identified in the responses.

Individuals Testifying at Hearings

Index No.	Speaker	Representing	Location
1	Stephen Bates	Sierra Club	Medford
2	Marjorie Kellogg	Self	Medford
3	Gayle Kellogg	Self	Medford
4	Richard Hein	Self	Medford
5	M. A. Dumas	Dumar Linen Supply and Dry Cleaners	Medford
6	Lynn Newbry	Medford Corporation	Medford
7	Gene Hopkins	Medford Chamber of Commerce	Medford
8	H. R. Gustafson	Northwest Fine Constructors Chapter, National Electrical Contractors Assoc.	Medford
9	Ray Marvin	Local Union 659, Int'l Brotherhood Electrical Workers	Medford
10	Jim Nistler	Nat'l Rep., Home Builders of Ore.	Medford
11	Harold C. Miles	Self	Lakeview
12	John McDonald	Lakeview Lumber Products Co. & Oregon Wind Door Co., Inc.	Lakeview
13	Lloyd Seeley	Self	Lakeview
14	Bridie Odegaard	Self	Lakeview
15	Sally Bourgeois	Self	Lakeview
16	Phil a. Lynch	Lynch Brothers	Lakeview

17	Erwin Abramson	Self	Lakeview
18	Linda McCormick	Self	Lakeview
19	Orvil R. Layton	Self	Lakeview
20	Kathy Dugan	Self	Lakeview
21	Jim Howard	Self	Lakeview
22	Bill Augustine	Self	Lakeview
23	Mavis Bomengan	Self	Lakeview
24	Dr. Kliewer	Self	Lakeview
25	Dr. Robert Bomengan	Self	Lakeview
26	Chuck Kelly	Self	Lakeview
27	Ernst McKinney	Self	Klamath Falls
28	James R. Ottoman	Self	Klamath Falls
29	Raymond Thorne	Self	Klamath Falls
30	Lowell Jones	Self	Klamath Falls
31	Dick Henzel	Self	Klamath Falls
32	Robert C. Fields	U.S. Field and Wildlife Service	Klamath Falls
33	Carrol B. Howe	Self	Klamath Falls
34	William Wales	Self	Klamath Falls
35	Joe Victorine	Siskiyou Co., Pomona Grange #6	Klamath Falls
36	Clarence Westlund	Building Trades - Klamath, Lake & Harney Counties; Ore Central Labor Council of Klamath & Lake Counties	Klamath Falls
37	Jack Tiskey	Self	Klamath Falls
38	Stuart Henzel	Self	Klamath Falls
39	Ray O. Peterson	Running Water Ranch	Klamath Falls
40	Paul Tschirky	Self	Klamath Falls

41	Harold Hall	Langell Valley Irrigation Dist.	Klamath Falls
42	James M. Flowers	Self	Klamath Falls
43	James Kerns	Klamath Agricultural Committee, Chamber of Commerce	Klamath Falls
44	John Kerns	Klamath County Farm Bureau	Klamath Falls
45	Charles Curtis	Self and for Bryant Williams, Co. Commissioner and for Floyd Gift, Co. Commissioner	Klamath Falls
46	Hal Balin	Self	Klamath Falls
47	Regis Andrew	Self	Klamath Falls
48	Andrew R. Gigler	Self and Friends of the Earth	Klamath Falls
49	Alfred Collier	Self	Klamath Falls
50	Martin Kerns	Self	Klamath Falls
51	Eddie Meeker	Klamath Co. Cattlemen Assoc.	Klamath Falls
52	Ray L. Roberts	Klamath Irrigation District	Klamath Falls
53	Michael E. Bureau	IBW Local 659	Klamath Falls
54	William Anklin	Self	Klamath Falls
55	Doris Johnson	Klamath Group, Sierra Club	Klamath Falls
56	Robert Beech	Self	Klamath Falls
57	Gary Gray	Self	Klamath Falls
58	Edmond Stastry	Self	Klamath Falls
59	Joe Victor	Self	Klamath Falls
60	John Hillen	Klamath Basin Hay Growers Assoc.	Klamath Falls
61	Tim Hayden	Self	Klamath Falls

62	Dan Techefsky	Wilderness Society	Boise
63	Janet Ward	Self	Boise
64	David Ortman	Friends of the Earth	Boise
65	Harold C. Miles	Idaho Consumer Affairs, Inc; Idaho Wildlife Federation	Boise
66	Leroy Davis	Self	Boise
67	Ernest E. Day	Self	Boise
68	Steve Bly	Self	Boise

Comment Letters Received

Index No.	Agency, Organization, or Individual
1	Oregon State Historic Preservation Office
2	U.S.D.I., Bureau of Indian Affairs
3	Boise Cascade Corporation
4	State of Idaho Department of Water Resources
5	Advisory Council on Historic Preservation
6	K. C. and M. C. Smith
7	Charles N. Bishop
8	D. A. Turcke
9	Columbia Plywood Corporation
10	Irving J. Decker
11	State of Idaho Department of Fish and Game
12	Wallace G. Iverson
13	The Wilderness Society
14	Terry L. Myers
15	Wildlife Management Institute
16	C. B. Cordy
17	Dennis and Christine Hill
18	Christine Hill
19	State of Oregon, Intergovernmental Relations Division
20	Andy Kerr
21	Patricia J. Flynn
22	State of Idaho, State Clearinghouse
23	Dennis W. Baird
24	Joe Flynn
25	Julia Flynn
26	D. Foreman
27	Laura Carlson
28	Rogue Valley Water Users
29	Jackie Wabbe
30	Bruce Bowler
31	William C. Peters
32	L. H. Platt
33	Concerned Citizens of Lakeview - Good, Conger, Rhinehart

34 Mrs. Richard Harlow
35 U.S.D.I., Fish and Wildlife Service
36 Public Utility Commissioner of Oregon
37 Esther N. Augustine
38 Betty Dean
39 Ray and Bernice Harlan
40 League of Women Voters of Klamath County
41 U.S.D.I., Bureau of Outdoor Recreation
42 Connie Urwyler
43 John E. Van Syoc
44 Jim Habermehl
45 Jess Ranch - G. H. Jess, Jr. and William L. Jess
46 Maxine H. Smith
47 Idaho State Historical Society
48 Mr. and Mrs. Archie Leydig
49 Town of Lakeview
50 Yale Sacks
51 Mrs. Robert J. Barton
52 Richard R. Hein
53 Glendora Green
54 Federal Power Commission
55 Surprise Valley Electrification Corp.
56 Pacific Power & Light Company
57 Gerald A. Jayne
58 Donald D. Denton
59 Messrs Liekerman, Murphy, and Rogg
60 Ted Orr
61 Stephen Arthur Jacobson
62 James Noxon
63 Arthur Warren Jones
64 D. Kaufman
65 Lester and Ella Vandergaw
66 U.S.D.A., Soil Conservation Service
67 Mr. and Mrs. Michael J. Guiney
68 D. Scribner
69 Kent Erskine
70 Tenn L. Hannon
71 Mt. Shasta Area Auduban Society
72 William R. Balfrey
73 Idaho Department of Parties & Recreation
74 D. R. Webb
75 Martin Tice
76 Leo Black
77 Debbie M. Reid
78 Oregon High Desert Study Group
79 Sally Bourgeois
80 William Tifschutz
81 U.S.D.I., Fish and Wildlife Service
82 U.S.D.I., Bureau of Mines
83 Elizabeth T. Bolster
84 John and Norma Carty
85 Martha Cory

86	Coon, Cole & Anderson - for National Auduban Society Izaak Walton League of America, Defenders of Wildlife, and Thomas A. Roster
87	Gordon Long
88	Ethel D. Kimberly
89	U.S. Environmental Protection Agency
90	Friends of the Earth
91	Peter Geiser
92	David J. Gaines
93	Michael and Claudia Silverman
94	Kathryn A. Peterson
95	E. "Frosty" Abramson
96	State of Oregon, Intergovernmental Relations Division
97	State of Oregon, Intergovernmental Relations Division
98	Oregon Student Public Interest Research Group
99	Lloyd J. Webb
100	Jeanne Post
101	Mark A. Woolley
102	Cal Elshoff
103	Karen Ratliff
104	Robert A. Hudson
105	Stephen A. Moen
106	Eleanor L. Bradley
107	Friends of the Earth
108	H. H. Boutin
109	Oregon Environmental Council
110	Lynn Peay
111	Clifford Partin
112	Ned Duhnrack
113	Dr. Kliewer
114	Cathy Moitoret
115	Gail Gredler
116	Dorothy B. Marshall
117	Marvin Prince
118	Art Newcombe
119	James Conroy
120	Edwin Lukl
121	Don Davidson
122	Thomas Glaccum
123	U.S.D.I., National Park Service
124	Town of Lakeview, L. Lane Thornton, Mayor
125	Rogue Ecology Council
126	Sierra Club
127	John B. Sutherland
128	S. L. Elefant
129	Pat Ford
130	U.S.D.A., Forest Service
131	Kevin Howe
132	Lakeview Planning Commission
133	Sierra Club
134	Oregon Natural Heritage Program
135	Grohs Brothers
136	Sally Bourgeois

137	L. G. Pierson
138	U.S.D.I., Bonneville Power Administration
139	Bud Garrett
140	Wayland Pierson
141	Marcy Willow
142	Katherine Ging
143	Ellen Harman
144	Oregon Student Public Interest Research Group
145	Linda Driskill
146	Harry Silcocks
147	Thomas Larson
148	Mary Collins

All correspondence received, with the exception of those that did not contain comments relative to the draft statement, is printed in Appendix D.

Three letters, representative of those received that did not contain comments on the adequacy of the draft statement but voiced only support or rejection of the proposed action, are also printed at the end of Appendix D.

TABLE OF CONTENTS
Comments and Responses

Subject	Page
Soils and Water Resources	13
Vegetation	15
Wildlife	17
Archaeological and Historical	23
Land Use	25
Esthetics	26
Recreation Resources	28
Socioeconomic Conditions	31
Market Area	35
Alternate Project Designs	37
General	43

Soils and Water Resources

1. COMMENT: Potential soil loss due to operation and maintenance should be shown in the Soils Section.

   Commentator: No. 138

   RESPONSE: Text has been changed in Chapter III, Soils to incorporate the comment.

2. COMMENT: Projected reduction in potential erosion (Table IV-1) doed not correlate with potential soil loss Table III-7.

   Commentator: No. 138

   RESPONSE: Text has been changed in Chapters III, V, and VI, Soils.

3. COMMENT: What is the amount of degradation allowable due to sedimentation.

   Commentator: No. 109

   RESPONSE: The Oregon Department of Environmental Quality has a general stipulation that these cannot be in excess of 10% increase in natural stream turbidity unless a permit is issued. There are no rules or guidelines for non-point sources in eastern Oregon. Calculations in Chapter III, Water Resources show the expected increase to be 0.0013%, well within the 10% limit.

4. COMMENT: What is the source of the base data of the Universal Soil Loss Equation (A = RKLSCP) found in Chapter III, Soils? The potential soil erosion figures derived from this equation are not valid because they are not based upon site specific base data information.

   Commentator: Nos. 90 and Hearing No. 63

   RESPONSE: Base data for the formula came from the following:

   R. Two-year six hour precipitation was taken from isopluvial maps (NOAA, Atlas, Precipitation Frequency Atlas of the Western United States. The 2-year 6-hr. number was then converted to a R value by using Figure 1 in Technical Release No. 51, Geology, U.S. Dept. of Agriculture, Soil Conservation Service, Sept. 1972.

   K. Described in Chapter III, Soils.

   LS. L was given a constant of 100 feet. S was determined by using USGS topographic maps of the area traversed. LS was then calculated by using Figure 2 in Technical release No. 51, Geology, U.S. Dept. of Agriculture, Soil Conservation Service, Sept. 1972.

   C. This was set equal to 1 because cropping protectives are not applicable in Chapter III.

P. This was set equal to 1 because erosion control practices are not applicable in Chapter III.

Site specific data for each tower site, road and trail segment, pulling pad, assembly area, etc. is not available. General data for the overall proposed project area was utilized to analyze and estimate potential soil erosion. The figures derived from this available information can be used to compare the potential erosion of the alternative routes.

Vegetation

1. COMMENT: Endangered and threatened flora: Information concerning distribution of the species listed is inadequate. The list is incomplete and somewhat inaccurate.

   Commentator: No. 35

   RESPONSE: The text has been revised (Chapter II, Vegetation, Endangered and Threatened Flora). A list of plants deserving special consideration furnished by the Portland Regional Office, Fish and Wildlife Service, has been substituted for the previous list of possible endangered flora within the proposed right-of-way. Information is now provided as to probable location by State, County, and habitat preference.

2. COMMENT: Page III-31 - The two sentences under "Toxic Emissions" are contradictory. The first says that EHV lines can produce above normal amounts of oxidants which can adversely affect plants. The second says "no data could be found to document that 500-kV lines (considered EHV) produced oxidants in amounts sufficient to damage plants." The second sentence is the conclusion we have reached based on extensive research and experience.

   Commentator: No. 138

   RESPONSE: The first sentence refers to EHV lines in general. The second sentence refers specifically to 500-kV lines.

3. COMMENT: At several places in the draft, it is stated that vegetative rehabilitation would take between 3 and 8 years to complete, except on presently barren areas, where no vegetation will be established. We believe that the 8 year maxijum is too optimistic for some desert areas in Idaho and eastern Oregon. This doubt is strengthened when we note that (1) on page I-37, post-construction rehabilitation will be accomplished at the rapid rate of 2.5 miles of right-of-way per day; and (2) the Forest Service admits that revegetation success is unpredictable (see pages IV-28 and 29)."

   Commentator: No. 35

   RESPONSE: There may have been some confusion between natural revegetation data and artificial revegetation data.

   The three to eight year period for natural revegetation was based on general climatic and site condition, and consultation with local range conservationists. It is believed realistic.

   (1) The 50 miles per month is the rate for artificial reseeding by a 10 man crew and mechanical processes.

   (2) The success of artificial reseeding cannot be positively predicted for any given year as climatic conditions can very widely from year to year. However, BLM seedings in the area involved have generally been very successful on the first effort.

4. COMMENT: It is indicated that clearing would be limited to a maximum 175-foot width, which seems rather narrow considering the height of conifers passed through in some areas.

   Commentator: No. 138

   RESPONSE: 175 feet is the width of the right-of-way applied for, and the maximum width allowed. Some conifers outside the right-of-way width may have to be selectively cut to avoid line hazards.

5. COMMENT: Stringing pads are also indicated to require a total of three acres of vegetation removal for the entire line. This seems low for 500-Kv stringing equipment.

   Commentator: No. 138

   RESPONSE: Applicant states that a 20 foot by 40 foot pulling pad would be required every three miles along the proposed line. The 391 mile proposed route would thus require approximately 130 pads, with a total area of about three acres.

Wildlife

1. COMMENT: What impact would the proposed project have on the migratory waterfowl using the Pacific Flyway. Some areas not mentioned are the Harney Basin area and the area between Harney Basin and Warner Valley.

   Commentator: Nos. 98 and Hearing 15 and 32.

   RESPONSE: Additions have been made to the text in Chapter III, Wildlife and Chapter VIII, Alternate Route I, Analysis of Impacts, Wildlife.

   The U.S. Fish and Wildlife Service (1976) states that the greatest hazard to waterfowl would be collision with the lines or towers during feeding flights which occur at low altitudes during periods of poor visibility rather than during high level non-stop migration flights. It is also known that some ducks are lost during erratic nuptial flights by colliding with closer spaced, smaller diameter, distribution lines. Whether or not this could be applied to the wider spaced, large diameter 500-Kv lines is not known.

2. COMMENT: The Draft Statement fails to clearly identify or comment on the existence within the Klamath Basin of the unique waterfowl phenomenon, the "feeding flight" and the collision problem that is likely to occur.

   Commentator: Nos. 35, 86 and Hearing 32.

   RESPONSE: The text in Chapters II and III, Wildlife, has been changed to further discuss and incorporate comments.

3. COMMENT: The Draft Statement fails to identify the concerns of various individuals and agencies, including the Fish and Wildlife Service, of the impact that the towers, conductors (transmission lines), and shield wires will have on waterfowl.

   Commentator: Nos. 35, 86, and Hearing 32.

   RESPONSE: The text in Chapter III, Wildlife, has been changed to further discuss and incorporate the comments.

4. COMMENT: What is the current position as to corona effects on wildlife and what studies have been done.

   Commentator: Nos. 35, 90, 98, and 138.

   RESPONSE: Very little data is available regarding corona effects on waterfowl and other wildlife and there is much disagreement on the subject. In its comments on the Draft Statement, Bonneville Power Administration stated: "We know of no basis whatever for the statement that the corona effect on migrating birds could cause more disruption or change in migrating patterns."

Martinka (1974) discusses the fact that duck shooting declined by about two-thirds after a power line crossed a Wisconsin hunting area and that Canada geese, in normal flight, never flew under power lines. Whether this resulted from seeing the power line or sensing any corona effect is not discussed.

While several studies show that some species of wildlife, especially big game, become accustomed to the noise associated with high voltage transmission lines, it is not known whether or not most wildlife is tolerant of the noise and electrostatic discharges which occur in adverse weather conditions.

Goodwin (1975) found that migrating elk and deer ignored noise levels of up to 68 decibels (see Chapter III, Wildlife). However, a Bonneville Power Administration report "Electrical Effects of Transmission Lines, September, 1975" states that studies in Norway showed that reindeer took from one to two years to adjust to noise levels from power lines. The Soviets are currently studying variabilities in pulse and arterial blood pressure of workers near 500-kV lines. Navy Laboratory personnel are currently exposing monkeys to various magnetic fields for one year to determine possible effects.

5. COMMENT: The statement's estimates of wildlife habitat affected by the proposed powerline and alternatives should supplement gross acreage figures given with an estimate of the percent of the available habitat that is likely to be affected.

Commentator: No. 89

RESPONSE: Data on habitat affected for most wildlife, especially non-game birds, animals, and reptiles is difficult to obtain. Gross data on "available habitat" is not as meaningful as data applied to crucial habitat such as wintering areas, fawning, strutting, and other production areas and critical migration routes. For example, most sagebursh lands could be sage-grouse habitat, but strutting and wintering areas are crucial habitat.

Indirect impacts, as referred to in the wildlife sections of the Draft Statement, are based on effects of vehicles and people on wildlife for one mile on each side of the proposed route construction road. In most remote portions of the proposed right-of-way the greatest adverse impacts would occur during the construction period and during hunting seasons. However, any residual trail or road would be used at various times throughout the year by recreationists using four-wheel drive and snow vehicles.

The text in Chapter III, Wildlife has also been revised.

6. COMMENT: The loss of riparian habitat and effect on upland game birds is discussed in the draft statement. Why has inadequate research been done on the subject.

Commentator: Nos. 56 and 98

RESPONSE: A total of three acres of riparian habitat would be disturbed during the construction period, with no permanent loss, and adverse impacts on upland game birds would be of short duration. (See Chapter III, Wildlife).

The effects of high voltage powerlines on wildlife resources has not been previously questioned to any great extent. But, with the current interest in the proposed project, research may be conducted in the future to identify affects on wildlife species and their habitat.

7. COMMENT: Mitigation should include establishing new habitat, equivalent to the habitat values lost, as well as seeking ways to lessen the environmental impacts by positive actions.

Commentator: No. 90

RESPONSE: See Chapter IV, Mitigating Measures. Measures therein include positive actions to lessen impacts and provide means of establishing new habitat.

8. COMMENT: The White Pelican is a unique, localized species in the Crump-Hart Lakes area that is not treated adequately in the statement.

Commentator: Nos. 71 and 128 and Hearing 15.

RESPONSE: The text has been changed in Chapters II and III, Wildlife.

9. COMMENT: Existing access along the proposed route, and alternates, was not taken into account. Thus, the total indirect impact is considered to be overestimated.

Commentator: No. 56

RESPONSE: The fact that some access exists along the proposed and alternate routes does not detract from potential problems caused by new access. Studies such as those by Goodwin (1975) indicate that there is a definite use of powerline rights-of-way by hunters and that the resulting hunting pressure moves animals away from the right-of-way, at least during the hunting season. He also found that a zone of intense hunting pressure exists for 0.8 km on either side of the right-of-way. His study also showed that the right-of-way and associated access roads "may be so attractive to hunters that they concentrate to the point of reducing their chances of killing game". Goodwin states that "in areas already heavily roaded, new access roads could stress local herds". He also points out that Fish and Game Departments may have to regulate seasons and road closures in certain areas to alleviate this problem.

Even with roads in an area, hunters appear to be drawn to powerlines because of the openings afforded in forested areas. They also use right-of-way, lines, and towers as a point of reference in unfamiliar territory.

10. COMMENT: The statement indicates that bird electorcution could occur, that the placement of the lines does not insure protection to large raptors.

Commentator: No. 146

RESPONSE: No inference was intended that there would be avian electrocutions. Conductors would be so widely separated that contact could not be made by the largest birds.

11. COMMENT: "Pacific believes that completion of the proposed project will not have a significant adverse impact on waterfowl populations as implied in the DEIS. Our conclusion is based upon consultations with recognized authorities and an extensive review of the literature, including two relatively recent papers, "Waterfowl Studies at Lake Sangchrist," by William L. Anderson, Sarah S. Hurley, and James W. Seets, and "Bird Deaths from Power Lines at Dungeness", by R. E. Scott, L. J. Roberts, and C. J. Cadbury."

Commentator: No. 56

RESPONSE: The "Waterfowl Studies at Lake Sangchrist" discusses losses of waterfowl by collisions with powerlines across a 2155 acre lake near a large power plant in Indiana. An estimated 300 waterfowl were killed during a four month period, out of a maximum of 100,000 birds. The study concludes that the mortality was relatively minor in terms of the total populations, since the vast majority of birds had flight patterns that did not bring them near the powerline.

In "Bird Deaths from Power Lines at Dungeness", Scott, Roberts, and Cadbury state that "Lines sited near estuaries, in river valleys, or between bodies of water provide a particular hazard when they lie across the flight paths used by waterfowl, waders, gulls, and other water birds between feeding and roosting areas". The study showed an actual count of 1285 birds killed, with a total loss estimated at 6000, over a six year period along a 2160 meter route on 188 searches. Most of the birds lost were nocturnal migrants and included ducks and other water birds. Cause of death was determined to be due to collision with the conductors on two parallel 400-kV lines. Losses appeared to be caused mainly by birds striking the smaller diameter ground wires. The study concludes that "locally, powerlines can present a hazard to birds, but this cause of mortality is unlikely to have much effect on populations except for a few species such as the (mute) swan". The conclusion also stated that resident birds may learn to avoid the obstructions, but that casualty rates may be fairly high for "a temporary period immediately following the erection of a new powerline".

Both studies demonstrate that waterfowl can collide with larger powerlines during night flights or other conditions of poor visibility.

Millions of birds are involved in the Klamath Basin migration and mass feeding flights. These flights contain the world's entire Rosses goose population. Losses of this species for even a short period of time could be of great importance.

12. COMMENT: The statement's discussions of surface water quality, fishery resources and associated environmental impacts is rather brief. These discussions should be expanded in the following manner: (a) describe the anadromous fish runs and resident fishery resources in each major stream crossed by a route alternative and identify the critical seasons for migration and spawning, (b) identify the critical water quality parameters which might be affected by powerline construction, their acceptable ranges and current values, (c) determine whether construction activities are likely to cause any of those parameters to go "outside" of their acceptable ranges, (d) identify the specific mitigation measures which will be used to minimize impacts on fishery resources, (c) attempt to quantify the residual impact on fisheries after accounting for the probable effectiveness of mitigation measures. Water quality parameters of concern would include dissolved oxygen, dissolved nitrogen, temperature, sediment and turbidity. At a minimum, the mitigation measures should include (a) the scheduling of construction activities to avoid critical periods, (b) approval of stream crossing procedures and vegetation removal and management activities by the appropriate State fish and game management agencies.

Commentator: Nos. 89 and 131

RESPONSE: (a) Additional fish species and crucial spawning periods are included in Chapter II, Wildlife. There are no anadromous fish along the proposed route from Midpoint to Malin, and it is doubtful that there are any between Malin and the proposed Medford substation site. (See Chapter II, Wildlife). Critical egg laying and incubation periods for salmonids and spiney-rayed fish have been included in Chapter II, Wildlife.

(b) Major water quality parameters possibly impacted by the proposed and alternate routes are turbidity and temperature. Dissolved oxygen and nitrogen are not believed to be crucial as no fertilizers are to be used near live waters. Minor increase in temperatures affecting oxygen could be caused by construction at major stream crossings. Acceptable temperature and turbidity parameters will be maintained with Oregon Department of Environmental Quality standards (10% cumulative increase in natural stream turbidity in major streams). This will not be exceeded unless a site specific permit is granted by the authorized officer (see Chapter IV).

Mitigating measures in Chapter IV will not allow construction along secondary streams during periods of high runoff and no construction will be allowed on the banks of major streams.

(c) & (d) Stipulations in Chapter IV should provide proper protection to stream banks and waterways. It is not expected that any of the parameters will go outside of accepted ranges pertaining to aquatic life and water quality.

(e) Quantification of residual impacts should not be necessary since all activities are one-time and of short duration and also because no construction activities will be allowed along the banks of major streams. Chapter IV mitigating measures are also believed sufficient to protect aquatic life and water quality in secondary streams.

13. COMMENT: The necessary description of the Klamath Basin, from a geographic and natural habitat standpoint in order to understand the interrelationship between agricultural and marsh land and wildlife refuge land, is absent.

Commentator: No. 86

RESPONSE: See text changes in Chapters II and III, Wildlife.

14. COMMENT: Mitigating measures should include consideration of any threatened fish species and be expanded to include a fisheries biologist as an advisor and consultant.

Commentator: No. 131

RESPONSE: See Chapter IV, Mitigating Measure number 31.

15. COMMENT: The power line that would cross the Goose Lake Valley would eliminate three resting areas, Lower Cottonwood, Muddy, and Girtles Reservoirs. Also, the number of waterfowl and wild game has been under estimated.

Commentator: Hearing Nos. 15 and 19.

RESPONSE: The three reservoirs are more than one mile from the proposed route and should not be impacted. Chapter II, Wildlife has been updated as to wildlife numbers and use.

16. COMMENT: Studies, including monitoring, should be required that will help avoid future conflicts with wildlife in siting similar facilities.

Commentator: Nos 81 and 90 and Hearing 64.

RESPONSE: See Chapter IV, Mitigating Measure No. 40.

Archaeological and Historical

1. Comment: An adequate inventory of the archaeological sites has not been completed for the proposed or alternate routes. A detailed archaeological reconnaissance of the proposed and alternate routes is required.

   Commentator: No. 47

   RESPONSE: Applicant's proposed route was surveyed between Midpoint, Idaho and Malin, Oregon by David Cole of the University of Oregon Museum of Natural History. The proposed route between Malin and Medford, Oregon was surveyed by Julia Follansbee, an archaeological consultant from Eugene, Oregon. These surveys were judged to be adequate for purposes of the document.

   The alternate routes discussed in the document total over 717 miles in length. No center line is defined as they are a general location - two miles in width. A detailed archaeological reconnaissance would cover approximately 1,000,000 acres. It would be prohibitive to conduct an intensive survey of an area this size with the prior knowledge that only one route will be actually utilized.

   Mitigating Measure number 22, Chapter IV, requires the Grantee to make a survey and inventory of archaeological, paleontological, and historical sites within the area to be occupied by the right-of-way and access roads. This will be accomplished prior to any construction activities. Under these procedures, BLM will require that qualified personnel are employed and will assure that there are appropriate consultation and coodination with State and Federal agencies concerned with archaeology. The State Historic Preservation Officer and the State Archaeologist will be informed of the results of this survey.

2. COMMENT: The Draft Statement does not adequately discuss or identify the important historical events which occured in the area, including early explorations, fur trapping in the early 1800's, mining activity, early trade routes which criss-crossed the area, cattle and sheep ranching, military operations in the late 1800's, and most important, the Oregon Trail emigration.

   Commentator: No. 1

   RESPONSE: The events and activities identified are indeed important in a general history of the area. However, any event or activity must be related to a specific site, and the site must be within the impact area before it is relevant to the Draft Statement.

   Judgments of the historic significance of a specific site cannot be assigned on the basis of the fact that the total area was utilized by man for one purpose or another, and that therefore the specific site possibly was utilized.

   The Draft Statement does identify the specific known sites of the Oregon Trail, military roads and bridges, stage routes, mining areas, and battlegrounds that fall within the impact area of the project.

3. COMMENT: The historical sites discussed in the text have little meaning because there are no descriptive materials and no statements of significance. The three variables of high, medium and low importance have no meaning because no criteria are listed to explain the difference between the three.

Commentator: No. 1

RESPONSE: The criteria used to evaluate historical significance and the quality of the historical setting are integrated in the procedure for assessing visual impacts upon historic resources. The criteria and procedures are explained in Chapter III, Archeological and Historic Values.

Historical sites were evaluated primarily on the basis of frequency of occurance, condition, extent, and authenticity. The ratings to each historical site on the basis of these criteria are found in the column headed "Historical Significance", Table III-17.

The environmental setting of the site was also considered in assigning values to historical resources. These values, based upon the degree of landscape modification of the area surrounding the site, are found in the column headed "Scenery Class", Table III-17.

The degree of impact is thus a composite rating based upon significance of the site, the degree of landscape modification around the site, and the visual contrast.

Land Use

1. COMMENT: You would be amiss not to include in your list of impacts on residential use, C.B. interferrence.

   Commentator: No. 90

   RESPONSE: The discussion of possible radio interferrence (Chapter III, Land Use, Urban-Suburban-Commercial-Industrial) also applies to C.B. use.

2. COMMENT: How are AUM's developed for BLM lands that the proposed route would cross and what is the capacity of various areas to support different kinds of animals. How much of the proposed route across BLM land is grazed.

   Commentator: Nos. 56 and 90

   RESPONSE: AUM's are developed for the geographic area, considering wildlife use, and the "area average" applied to the proposed route. Data regarding grazing use of the proposed route is included in Chapter II, Land Use. Information regarding grazing animals, both domestic and wildlife, is available for the geographical areas involved but not on a "site specific" route basis.

Esthetics

1. COMMENT: The impacts upon historical resources are visual as opposed to physical in nature and should, therefore, be included in the esthetics section of the Draft Statement.

   Commentator: No. 56

   RESPONSE: The proposed action impacts upon historical sites relate directly to the integrity of the historical setting and are considered proper for discussion under the section Archeological and Historical Values.

2. COMMENT: To apply the U. S. Forest Service Visual Management System on BLM lands may be like comparing apples and oranges. The lands administered by BLM are unique in their own right and should be considered for that uniqueness. That uniqueness should be evident in the rating system and, at present, is not.

   Commentator: No. 73

   RESPONSE: The esthetic values (visual resources) of the area were evaluated using the Bureau of Land Management's Recreation Information System (RIS) procedures. The RIS scenery evaluation criteria, which includes a measure of uniqueness, was developed specifically for the classification of esthetic values on BLM administered lands. See Chapter II, Esthetics, and Appendix B for specific RIS information.

   The esthetic sensitivity of the area, which is a measure of the extent and type of visual concern, was evaluated using U. S. Forest Service Visual Management System criteria. The subsequently developed BLM Visual Resource Management procedure utilize the RIS scenery evaluation criteria together with visual sensitivity criteria conceptually similar to that of the U.S.F.S. See Chapter II, Esthetics, and Appendix C for specific visual sensitivity information.

3. COMMENT: Familiarity with the Owyhee Mountains suggests that scenic values are much greater than classified by the system used in the Draft Statement. It is suggested that esthetic values be reevaluated and reclassified by a method using other than vertical aerial photographs. In conjunction with vertical photographs, it is suggested that stereo obliques be used from group observer positions along the route. Such perspectives should include being below, at the same level as, or above the visual objective. These viewing positions are generally referred to as inferior, observer normal, and observer superior, respectively. It is felt this methodology would offer greater value for scenic evaluation purposes.

   Commentator: No. 73

   RESPONSE: The esthetic values of the area were evaluated using the Bureau of Land Management's Recreation Information System (RIS) scenery evaluation procedures and criteria. The following factors were considered in delineating scenery rating areas:

1) Like physiographic characteristics (i.e., land form, vegetation, etc.)

2) Similiar visual patterns, texture, color, variety, etc.

3) Areas which have similar impact from intrusions.

The scenery rating area of the Owyhee Mountains were established through a composite of vertical aerial photographs, aerial flights (fixed wing and helicopter), and "on the ground" observations. The visual impacts described in Chapter III, Esthetics, are based upon an analysis of various viewer positions along the proposed transmission line route.

4. COMMENT: The Draft Statement should include a projection of the number of people that will be viewing particular landscapes over the next 30, 40 and 50 years. Since sightseeing use will increase, it is felt a more accurate representation of scenic classification ratings can be achieved through the use of projections.

Commentator No. 73

RESPONSE: The text in Chapter III, Esthetics and Recreation Resources, has been revised to incorporate available use projections. Use projections for specific recreational activities at specific locations along the transmission line route are generally not available.

5. COMMENT: The Draft Statement must be revised or rewritten to analyze the probability of the proposed right-of-way being used for additional transmission and utility lines in the future with a reduction in esthetic and recreational productivity.

Commentator: No. 109

RESPONSE: The possibility of the proposed route becoming a major east-west utility corridor with multiplier recreation-esthetic impacts is discussed in Chapter VI, Esthetics.

6. COMMENT: There is no mention of the visual impact on the proposed wilderness area that BLM is considering in the Beatty Butte area.

Commentator: Hearing 19

RESPONSE: The esthetic/recreational impact on the potential Bureau of Land Management roadless study area east of Beatty Butte is discussed in Chapter III, Recreation Resources.

Recreation Resources

1. COMMENT: The Draft Statement estimate of 2000 visitors, including 911 hunters, to the Owyhee Mountains is quite low. Based upon 1974 and 1975 use data, an estimate of 6000 visitors, including 5,132 deer hunters, would be more accurate.

   Commentator: No. 11

   RESPONSE: The text in Chapter III, Recreation Resources, has been revised to reflect this use estimate.

2. COMMENT: The unresolved legal question concerning transmission lines and the Wild and Scenic Rivers Act must be resolved as the proposed project impacts a river of National significance.

   Commentator: No. 19 and 109 and Hearing 63.

   RESPONSE: The Wild and Scenic Rivers Act, P.L. 90-542, as amended, does not preclude rights-of-way for public and private utilities, roads, pipelines or other purposes within study or component river areas. The proposed route crosses the Owyhee River in a location which minimizes esthetic and recreational impacts. Proposed mitigating measures further lessen esthetic and recreational impacts at the Owyhee River crossing. The text in Chapter III, Estehtics, and Chapter IV, Bureau of Land Management Mitigating Measures, has been revised to clarify the effect of the Wild and Scenic Rivers Act upon the proposed project.

3. COMMENT: The Draft Statement should include a statement that the proposed project would adversely impact the Lower Klamath National Wildlife Refuge as a National Historic Landmark.

   Commentator: No. 35

   RESPONSE: The text in Chapter II, Esthetics; Chapter III, Esthetics; and Chapter V, Esthetics and Recreation Resources, has been revised to reflect this impact.

4. COMMENT: Because of existing primitive roads and trails utilized by off-road vehicles and hunters, the construction of the proposed project will not necessarily increase access in many of the areas alluded to in the Draft Statement. Consequently, the figures used to "quantify" wildlife habitat in the "roadless areas" adversely impacted by construction of the proposed project are inconsistent with a more complete description of the existing environment. Also, according to one study, "Big-Game Movement near 500-KV Transmission Line in Northern Idaho," by John G. Goodwin, the existence of a right-of-way does not necessarily adversely impact wildlife behavioral patterns.

   Commentator: No. 56

   RESPONSE: Although four-wheel drive access routes do exist in many of the "roadless" areas along and adjacent to the proposed route, the development of a lineal access route could result in increased access by off-road vehicle enthusiasts, hunters and other recreational users.

Goodwins study states that "The most significant influence of the transmission line in elk movement was hunter activity on the cleared right-of-way and access roads". Goodwin also observed that hunters broke locked gates in order to drive on the right-of-way, or went around the gates on motorcycles. Hunting pressure also moved game animals away from roads and clearings (Goodwin, 1975).

5. COMMENT: Potential increased public access is considered to be adverse, but is not balanced by an evaluation of existing off-road vehicle trails along the routes. Without an analysis of existing access, there is no apparent basis for comparing impacts of present and future conditions.

   Commentator: No. 56 and 138

   RESPONSE: The area traversed by the proposed and alternate routes is typically criss-crossed by an existing network of widely scattered off-road vehicle trails and low standard roads. The existing trail-road network provides varying degrees of public access to portions of the region traversed by the proposed and alternate routes. Information based upon detail mapping and analysis of existing roads and trails is not available.

   The construction of the proposed project would result in additional and "lineal" access through and connecting all areas traversed by the transmission line.

6. COMMENT: The proposed transmission line crossing of the Owyhee River will not have a significant impact on the Wild and Scneic River values. This position is supported by the Bureau of Outdoor Recreation.

   Commentator: No. 56

   RESPONSE: The text in Chapter II, Recreation Resources and Chapter III, Esthetics, has been revised to include all Bureau of Outdoor Recreation comments concerning the Owyhee River.

7. COMMENT: The Draft Statement did not discuss the visual intrusion and esthetic impact of Alternate Route II on the Reynolds Creek Back Country area and the Twin Peaks Scenic Area.

   Commentator: No. 56

   RESPONSE: Text in Chapter VIII, Alternate Route II, Esthetics and Recreation Resources revised to include impact.

8. COMMENT: Stringent mitigating measures to avoid nearly 200 miles of temporary roads becoming accessible to ORV travel are required. The responsibility of Pacific Power and Light in preventing this increased accessibility must be clearly stated in the Draft Statement.

   Commentator: No. 126

RESPONSE: The potential for increased public access and its attendant impact upon esthetic, wildlife and other resource values is considered throughout the final impact statement. Mitigating measures are designed to lessen impacts resulting from increased ORV access - See Chapter IV, Bureau of Land Management Mitigating Measures No. 5, 10, 11 and 13; Forest Service Mitigating Measures - Access No. 1, 2, 3, 4, 5, 7, and 8; Applicant Committed Mitigating Measures - Land & Water Resources No. 1, 2, 3, 4 and Other Measures No. 4, 5, 6, and 11. Bureau of Land Management and Forest Service mitigating measures will become stipulations in any right-of-way permit issued. Applicant committed mitigating measures may become stipulations in any right-of-way permit issued.

Socioeconomic Conditions

1. COMMENT: The Draft Statement does not adequately discuss the possibility of secondary or induced growth which would result from the proposed project, particularly in the Medford area.

   Commentator: Nos. 18, 20, 98, 109, 126.

   RESPONSE: There are many secondary impacts which would be expected in the Medford area if the project is constructed, both beneficial and adverse. Changes would be expected to occur in resource use, income, employment, water and air quality, recreation opportunities, noise, crowding, financing, social services, and many other areas. Any assessment of the impacts of growth would require information not presently available, including the kind of industries that could be expected, numbers of employees, numbers of new residents and other specific data.

   Construction of the proposed project would not only provide additional electric power to the Medford area, but would apparently provide for continued future growth and development of this southwestern Oregon market area as well. The project would not only meet current needs for reliable electric power and those anticipated in the very near future, but would provide for future growth. Population growth and the related industrial and economic growth is usually associated with increased natural resource and energy use and some decrease in the quality of the environment. "For a nation or a large region, the consumption of natural resources and the potential detrimental impact on the environment, as well as the material benefits, is assumed to increase roughly in proportion to the increase in the gross product. This relationship appears to be approximately correct for the overall average. However, there are variations in the potential impact from basic industries as compared to secondary industries." 1/ The Air Quality section in Chapter II has been modified. The text in Chapter III, Market Area, and Chapter V, Socioeconomic Conditions, has been revised to reflect secondary impacts.

2. COMMENT: The no action alternative should include an analysis of such a decision on the profits of Pacific Power & Light Company.

   Commentator: No. 20

   RESPONSE: The profit and loss aspects of a company's operation do not appear to be relevant when assessing environmental impacts of the applicants' proposal. Financial status is taken into consideration by the Public Utilities Commission prior to issuing a permit. As this has been done by the Oregon POC (Order #76-359), it would not be appropriate for this Bureau to justify or refute data leading to that decision.

1/ Ecology and the Economy, Pacific Northwest River Basin Commission, November, 1973.

3. COMMENT: The Draft Statement should include a summary of the impacts of coal mining and generation from the Powder River EIS (1974) and the Jim Bridger EIS (1971). As the market area for this transmitted electricity is considered, so the source of the electricity should be considered.

Commentator: No. 126

RESPONSE: Copies of the Jim Bridger and Powder River Environmental Statements are currently available to interested parties. Summaries of the environmental impacts discussed in these reports would add considerable length to an already lengthy document. It was considered inappropriate to include summaries of these related actions in this environmental statement.

4. COMMENT: Questions of optimum population growth in Josephine and Jackson Counties are neither raised nor addressed.

Commentator: No. 126

RESPONSE: Concern over population growth has been expressed at least since Thomas Malthus' writings in the early 1800's. Restricting or controlling population growth in the United States has been largely a philosophical issue. The State of Oregon has expressed the desire to control or slow growth, but there appear to be few methods to actually prevent immigration and natural population increase. Jackson and Josephine Counties have not been established optimal population growth levels, so the subject was not raised in the Draft Statement.

5. COMMENT: The Draft Statement does not reflect that a high voltage line constructed on the proposed route would become a restrictive barrier to further community expansion of Lakeview, Oregon.

Commentator: No. 132

RESPONSE: It appears probable that future expansion in Lakeview will be to the north along the eastern edge of the valley. Construction of the 500 KV powerline along the proposed route could influence the value of these lands for residential development. Based on observations of similar powerlines, construction of the line would not be expected to preclude residential development. It appears likely that construction of the powerline would not restrict land use but could influence esthetic values and property values.

6. COMMENT: The Draft Statement indicates that increased population of 50 to 100 persons (construction crews) in the communities of Lakeview or Burns would cause adverse impacts through overloading of stores and services. Most communities in southern Oregon are oriented toward major increases in population during specific times of the year, including waterfowl and big game hunting seasons and the general tourist season. Since these communities are oriented toward such increases, it does not appear that the impacts would be adverse as indicated.

Commentator: No. 138

RESPONSE: An influx of people - whether construction crews, hunters, or others - can be either considered an adverse or beneficial impact dependent on point of view. Local entrepreneurs would most likely view presence of a construction crew as beneficial while other local residents would not. It is true that many communities experience a hunting or tourist influence each year. Whether this influx is beneficial or adverse is probably moot. The essential point relevant to this environmental statement is that adverse impacts from construction activities appear to be short-term.

7. COMMENT: The Draft Statement fails to adequately discuss the potential loss of hunting (migratory waterfowl, deer and upland game) and tourist (bird watching) industries in Klamath County which would result from the proposed project.

Commentator: No. 40

RESPONSE: The effect of the proposed transmission line upon game numbers, including waterfowl, upland birds, and deer cannot be precisely determined. However, it is believed that even if some changes (losses) did occur, the number of people participating in "Tourism" would not be materially affected.

A major change in migratory waterfowl flight patterns is not expected.

8. COMMENT: The impact on land values resulting from the proposed route, which are related to the attitudes of individual or agency "owners", could be estimated and verified through comparison with pre and post construction land values along other powerlines.

Commentator: No. 56

RESPONSE: It appears that no methodology currently exists which could be objectively and accurately utilized to assess the impact on land values along the proposed route. Although information regarding impacts on land values along other powerlines is available, it is known that impacts vary from region to region as a result of individual land owners and their varying attitudes and opinions.

Both public hearings and written comments provide indications of non-pecuniary public values in the lands involved in the proposed right-of-way.

9. COMMENT: How much tax revenue would Lake County receive as a result of the powerline.

Commentator: Hearing 16.

RESPONSE: The amount of taxes which would accrue to Lake County as a result of constructing the proposed powerline and appurtenances is not known. Assessment and apportionment would be handled by the State of Oregon and State of Idaho after the power line is in

operation. However, some estimates can be made for comparative purposes. The following is based on mileage of the routes as described in the DES and a total project cost of $84.4 million, approximately $55.7 million of which would be in Oregon.

LAKE COUNTY, OREGON	MILES	APPROXIMATE REVENUE
Proposed Route, Midpoint to Malin	95	$347,000
Alternative #1 " " "	75	$227,000
Alternative #2 " " "	95	$321,500
Alternative #3 " " "	49	$152,300
Alternative #4 " " "	49	$152,300

Market Area

1. COMMENT: The Draft Statement assumed population growth rate of 2.5% annually is without merit. An unbiased statement would accept the 1% projection made and used in economic and land use planning decisions throughout Oregon and the Pacific Northwest.

   • Commentator: No. 19

   RESPONSE: Although the "OBERS" population projections made by the Bureau of Economic Analysis and Economic Research Service have proven to be remarkably accurate for the nation as a whole, the projections have not proven accurate for some states and regions. In Jackson and Josephine Counties, Oregon, a 20-year record indicates continued population growth at rates of 2.5% and 2% annually. Although it is physically impossible for population to increase forever, there are no indications that the population of this area is leveling off or declining.

   It would appear quite inappropriate to project future population growth at 1% or less where growth rates of 2 and 2.5% are in evidence.

2. COMMENT: The Draft Statement indication that industry will decline without the proposed project is without merit.

   Commentator: No. 19

   RESPONSE: The text in Chapter II, Market Area, has been changed to identify the potential results of an energy deficit upon industrial activity.

   It must be assumed that an energy deficit would reduce the level of potential industrial expansion and could ultimately reduce the current level of industrial activity in the market area. The magnitude of any industrial decline would depend upon the magnitude of the energy deficit.

3. COMMENT: The Draft Statement should discuss more throughly the benefits to the market area environment resulting from increased energy availability for solving air and water pollution problems.

   Commentator: No. 56

   RESPONSE: Increased electric power in southwestern Oregon as a result of the proposed project would contribute toward reducing some air and water pollution problems. However, there is no data available which would show just how much of the additional power would be directly used for pollution abatement and control. The records of energy sales would indicate the majority of power would be used for residential, commercial, and industrial purposes not directly related to pollution control activities. However, overhead

frost protection sprinklers are being used in the Rogue Valley in some areas, replacing oil fired smudge pots to protect fruit orchards from frost. One megawatt of power used for frost protection sprinklers will protect 291 acres of fruit orchard eliminating the need for 10,200 oil burning orchard heaters. The savings in barrels of oil that would otherwise be used is not known nor has any data been gathered as to the reduction in air pollution resulting, and that would further result, from elimination of smudge pots.

4. COMMENT: The Draft Statement fails to identify population and growth characteristics of the Market Area together with population growth assumptions and impacts resulting from the proposed project.

Commentator: No. 109

RESPONSE: A 20-year record of population increase in Jackson and Josephine Counties is included in Chapter II, Market Area, of the Draft Statement. Three leads of projected population growth are also included in graphic and tabular form. The most recent Chamber of Commerce population estimates together with populations of selected cities and towns over a 12-year period are included in the Draft Statement.

Alternate Project Designs

1. COMMENT: The use, and upgrading, of existing power lines and rights-of-ways should be further discussed.

   Commentator: Nos. 13, 19, 40, 73, 90, 98, 109, 125, 126, 133, 138; Hearing 62 and 63.

   RESPONSE: The text in Chapter VIII, Alternate Project Designs, has been changed to further discuss upgrading existing power lines.

2. COMMENT: The Draft Statement does not consider routing the line through California.

   Commentator: No. 19

   RESPONSE: See Chapter VIII, Alternative Project Designs for change in the text.

3. COMMENT: The environmental impact of the transmission right-of-way, should it become a "multiple project corridor" in the future, has not been adequately assessed.

   Commentator: Nos. 35, 73, 86, 109, 126, and 133.

   RESPONSE: Text has been revised in Chapter VI, Land Use.

4. COMMENT: A section of the Final Environmental Statement should fully discuss the realtionship of the proposed line and alternative to future planned utility developments within the Northwest Power System.

   Commentator: No. 13

   RESPONSE: The Final Environmental Statement does not contain a full discussion of the relationship of the proposed line and alternatives to future planned utility developments within the Northwest Power System as such a study, or energy plan, has not been done.

5. COMMENT: The alternatives of additional capacity at the Boardman Energy Complex and Centralia as well as system alternatives for transmitting Wyoming generated power to Willamette Valley and Puget Sound load centers, and California markets should be examined.

   Commentator: Nos. 90 and 130

   RESPONSE: The Boardman plant is in the initial stage of construction (land clearing, etc.). The first unit will not be in operation until the early 1980's, which does not correspond to the applicants' time frame in meeting its energy deficit in the market area.

   The PP&L Centralia plant is presently being operated at capacity with no room for additional generation without adding additional generation units. If this should be done, coal would have to be imported from

PP&L Wyoming sources. This does not appear to be feasible since the Jim Bridger plant is already constructed and near the coal source.

Electrically, any geographical area can be defined as a "generation area" or a "load area" by finding the algebraic sum of production and consumption. Load areas in the northwest are the large population centers in the western parts of Oregon and Washington, which can be roughly defined as the Puget Area, Longview-Portland Area, Willamette Area, and Southern Oregon Area. Generation areas can be roughly defined as Mid-Columbia, Lower Columbia, and Snake.

PP&L's proposed 500 Kv line seeks to connect a generation area (Wyoming) to a load area (Southern Oregon). Any alternate which has a generation area as its western terminal does not in itself deliver the electricity to the consumer and additional transmission would have to be provided to the load area.

6. COMMENT: The undergrounding alternative should be examined in the Klamath Basin area; why should underground cables be more undesirable than underground gas or oil lines.

Commentator: Nos. 86 and 90.

RESPONSE: The technology of undergrounding for 500 Kv transmission lines is such that the reliability of the entire line would be jeopardized by a "weak link" such as across the Klamath Basin. No underground installation of 500 Kv voltage and capacity is in commercial operation today. Some underground installations at 345 Kv are in commercial operation and a 1975 failure on such a Consolidated Edison Co. installation required 21 days to locate and repair. A failure of an overhead line is usually repaired within 24 hours.

Unlike underground gas and oil lines, undergrounding high voltage electric transmission lines requires excavation of a trench about 14 feet wide for placement of the conducting cables and cooling system. The electric cables give off a great amount of heat which must be dissipated to prevent failure of the entire system. This requires that the trench be backfilled with a special material known as "thermal sand". This constitutes a permanent scar upon the landscape as it cannot be revegetated.

A "Study of Environmental Impact of Underground Transmission Systems", May, 1975 prepared for the Electric Power Research Institute and the Energy Research and Development Administration; distributed by the U. S. Department of Commerce, National Technical Information Service, should be consulted for an in-depth analysis of underground electrical transmission systems.

7. COMMENT: Using BPA power in southwestern and eastern Oregon and northern California and channeling PP&L's Jim Bridger power to the southwest through sale to BPA (or exchange) should be discussed.

Commentator: No. 40

RESPONSE: Bonneville Power Administration markets federally generated power in the Columbia River watershed. To the extent that it is necessary to market this power, BPA builds and operates power lines in the northwest region. It's transmission system does not cover the entire northwest, or the southwest.

In a fully integrated system such as the Pacific Northwest grid, of which BPA owned transmission lines are a part of, power from a given generating source is transmitted over several transmission lines, according to generation and load patterns at a particular time. With a given generation, transmission and load pattern, the power flow is essentially uncontrolled. Variations in the flow of power are achieved by adjusting generation patterns, modifying loads, or switching of transmission facilities. Power is not channeled through the sale or exchange of power among utilities unless such sale or exchange modifies generation patterns.

8. COMMENT: What is the relationship of the proposed line to present and future utility development in the northwest; will it duplicate BPA facilities.

Commentator: No. 89

RESPONSE: The Bureau does not have any knowledge of any future proposed developments in the northwest that will meet the applicants objective of meeting power needs in southwest Oregon nor of any transmission lines planned for construction by BPA to transmit surplus Wyoming electric energy to the Northwest.

The existing transmission system is not adequate to transfer the levels of power contemplated from Jim Bridger and other Wyoming generation to PP&L's Northwest loads. The proposed line does fit into the planned developments of the Northwest System and meets the need for additional transmission capacity between Idaho and the Northwest.

9. COMMENT: What are the short and long term impacts, both primary and secondary, of the proposed transmission line upon the integrated Pacific Northwest - Pacific Southwest electrical grid system and its operation.

Commentator: No. 130

RESPONSE: The proposed transmission line will become a part of the Northwest transmission system. As such, it will not only perform its main function of providing additional capacity between the Northwest and Idaho but will also provide some backup transmission capacity to the rest of the transmission system with which it is interconnected. The proposed line does fit into the planned development of the Northwest system. This is essentially true as regards to development of Wyoming coal-fired generation to serve Northwest loads.

As a result of the proposed interconnection at Malin between the Midpoint-Medford 500 Kv line and the Pacific Northwest-Southwest intertie, there will be some interaction between the two systems. This interaction, depending on the interconnected system load and generation patterns, the effect can be, at times, beneficial and, at times, detrimental to the operation of the PNW-PSW intertie. The proposed Midpoint-Medford 500 Kv line has been designed such that any detrimental effects on the operation of the PNW-PSW intertie can be eliminated, when necessary, by opening the connection at Malin.

It is expected that any short-term detrimental impacts of the Midpoint-Medford 500 Kv line will diminish as secondary energy availability on the Northwest lessens and as additional transmission lines are constructed to increase intertie capacity. The long-range impact of the proposed line should enhance the operation of the PNW-PSW intertie by making the surplus resources of the Rocky Mountain area available to both the Northwest and the Southwest during times of energy shortages.

10. COMMENT: What is PP&L's distribution plans for the electricity?

Commentator: Nos. 19 and 98.

RESPONSE: Text has been modified in Chapter I, applicants' Proposed Action.

11. COMMENT: The "reduction in market demand" section, pages VIII-230 to VIII-235, is even more sketchy, and does not give even a minimum degree of attention to the "Energy efficiency" benefits that would accrue to these and similar alternatives. Again the Bonneville Power Administration is given as the only reference, so the lack of an inclusive approach to these aspects is evident.

Commentator: No. 125

RESPONSE: The Draft Statement was designed to assess the most viable alternatives to the proposed project. The alternatives presented in Chapter VIII, pages 218-235 represent a summary of information included in "BPA Participation in Regional Interutility Cooperation". It is not considered appropriate to expand this section of the environmental statement since the information is available in the BPA DES. Also, Bonneville Power Administration is the primary agency in the Department of the Interior with electrical expertise and as such is consultant to the Bureau of Land Management.

12. COMMENT: Peak load management and peak pricing, similar to what the telephone companies are using, should be discussed.

Commentator: Nos. 20 and 126

RESPONSE: Peak load management and pricing is being studied by the Electric Power Research Institute using the consulting firms of EBASCO and NERA. No results of the studies are as yet available.

13. COMMENT: Additional alternate routes through the Klamath Basin should be discussed.

Commentator: Nos. 35, 36, 81, 86 and 98.

RESPONSE: Two additional Klamath Basin alternates are included in Chapter VIII.

14. COMMENT: The potential for commercial development of electricity from geothermal resources, and resultant impacts, should be described in the EIS.

Commentator: No. 56 and 126

RESPONSE: Production of commercial quantities of electricity from geothermal sources in the area is highly speculative based on presently available data. The probability was judged too remote to merit detailed discussion. See Chapter VIII, No Action and Alternate Sources of Power, Geothermal.

15. COMMENT: The Draft Statement does not adequately discuss the use of geothermal resources in Klamath County in lieu of the use of electricity.

Commentator: No. 40

RESPONSE: There is a potential for additional use of geothermal resources in lieu of electricity for space heating in Klamath County. However, total geothermal use for this purpose, or in generating electricity, on a regional basis is projected to meet only a small percentage of the energy need in the foreseeable future (see Chapter VIII, No Action and Alternate Sources of Power, Geothermal).

16. COMMENT: The EIS should describe and evaluate reasonable alternate routes across the Klamath Basin that would avoid or greatly mitigate the impacts on migratory waterfowl, especially the threat to the feeding flights.

Commentator: Nos. 36, 68, 71, 72, 86, 98, 101 and 109; Hearing 32.

RESPONSE: New alternate routes in the Klamath Basin area have been included in Chapter VIII. Alternate route 3, Malin to Medford, generally follows the route suggested in these comments.

17. COMMENT: A route should be considered through northern California that would avoid many concerns of the Fish and Wildlife Service

Commentator: Nos. 15, 35 and 81

RESPONSE: See new alternate routes evaluated in Chapter VIII, Alternate Route 4, Malin to Medford, follows the route suggested in these comments.

18. COMMENT: It would appear a nuclear plant, producing 500 megawatts, in the Coos Bay area is an alternative.

Commentator: Hearing 11 and 65.

RESPONSE: If a nuclear plant of approximately 1000-1250 MW rating (standard sizes) was able to be built and in operation in the area of Coos Bay by 1978-80, this would be an alternate. However, it takes approximately eight to ten years to plan and build a nuclear plant so this is not a viable alternate in this time frame. It would, however, be a future alternate source of power and is discussed in the DES on pages VIII-221 to 224. In addition, some transmission would be required from the plant to southern Oregon load centers.

General

1. COMMENT: The Draft Statement does not consider construction activity noise to be an adverse impact. Noise impact depends upon the proximity of communities and individual dwellings to the transmission line route. A more in-depth analysis of construction noise impact, considering closeness of dwellings to the proposed and alternate routes is suggested.

   Commentator: No. 56

   RESPONSE: The impacts of noise during construction are addressed in Chapter III, Noise. The discussion of alternate routes states the type of noise impacts would be the same as for the proposed route - Chapter VIII, Noise.

   Construction noise impacts on dwellings would be of limited duration. Specific data on exact number of dwellings is not available for the alternate routes; however, a relatively small number would be affected on all the routes. Under these circumstances, an "in-depth analysis" is not considered necessary.

2. COMMENT: The Klamath County League of Women Voters does not think the EIS Draft addresses Goal Three adequately in that investigation of alternate routes has not been complete (The statement says only Alternate Routes #1 and #2 were surveyed by aerial flight); that consideration of any other route alternate than those proposed by Pacific Power and Light has not been addressed.

   Commentator: No. 40

   RESPONSE: The route applied for by PP&L was studied and addressed in Chapters I through VII of the DES. It, and all alternate routes discussed in Chapter VIII were studied by air and ground transportation.

3. COMMENT: Are the stipulations in Chapter IV proposed and subject to modification.

   Commentator: No. 56

   RESPONSE: The Mitigating Measures listed in the FES will be committed to by the Grantor and Grantee.

4. COMMENT: The average weight of a tower of 17,000 pounds appears to be low.

   Commentator: No. 138

   RESPONSE: The 17,000 pound average weight is the best information available from applicant.

5. COMMENT: The summary ratings imply that a ranking judgment could be derived from an addition of the ratings for various impacted features. Such an addition gives extremely misleading results.

Commentator: Nos. 56 and 138.

RESPONSE: The 1 through 5 rankings were used to show only the relative impacts for the particular resource or factor considered. It was not meant to imply that a summary "ranking" could be obtained by simple addition of individual rankings. Such addition would be misleading. Therefore, to avoid any possible misunderstanding, the 1 through 5 rankings have been deleted in the Summary-Analysis section of Chapter VIII.

6. COMMENT: It would seem appropriate that the statement discuss the 345-Kv powerlines from Jim Bridger to Kinport, Idaho and from Kinport to Midpoint, Idaho.

Commentator: No. 89

RESPONSE: The 345-Kv Jim Bridger to Kinport line is part of the 3-line, 345-Kv transmission system for Jim Bridger already approved for construction across federal lands. The 345-Kv lines from Kinport to Midpoint will replace lower voltage existing lines on an existing right-of-way, and are under Federal Power Commission license.

7. COMMENT: The reliability factor is seldom discussed but yet would offer the public and the utilities another option for reviewing new generation or additional transmission facilities as against a risk factor of decreased availability of electricity. What is this factor? What would be the calculated risks if this factor were decreased?

Commentator: No. 126

RESPONSE: Generation resources in the Northwest are planned to provide an annual loss of load probability equivalent to one day in twenty years. Transmission reliability is based on contingency type criteria. For example, the momentary loss of one line to a load area while another line to the same area is out of service will not cause disconnection of load. Risk factors of decreased availability of electricity are not used.

8. COMMENT: The Draft Statement is deficient in its discussion of statewide planning goals/guidelines and fails to adequately deal with such matters as (a) how existing or developing comprehensive plans of affected cities and counties will be impacted by, or will impact, the proposed project, and (b) how existing plans of local governments were consulted and used as a data base in formulation of the statement.

Commentator No. 97

A complete description of the route proposed by Pacific Power & Light to construct a 500-Kv powerline from Midpoint, Idaho to Malin and Medford, Oregon along the several alternative routes was presented to a number of organizations and individuals in April, 1975. This letter was sent to 12 Federal agencies, 17 State agencies in both Idaho and Oregon, 12 boards of County Commissioners in both Idaho and Oregon, 51 organizations and conservation groups and 22 companies and individuals.

The letter requested comments and suggestions in preparing the draft environmental statement to insure that the statement would reflect the full range of environmental and human considerations. The letter was sent to the State Clearinghouse. In addition, each County was contacted regarding completed comprehensive plans or draft plans. Statewide planning goals and guidelines were considered in preparing the draft environmental statement. Individual plans and zoning ordinances were examined to assess how these related to the proposed action and alternatives.

9. COMMENT: The public has not been provided with adequate information on the subject of need.

Commentators: Nos. 13 and 20; Hearing 62 and 64.

RESPONSE: The justification of need for additional electricity has been established by the Oregon Public Utility Commissioner by Order No. 76-359 dated May 28, 1976. This order was issued after hearings were held in December 1, 2, 16, 17 and 18, 1975, and March 2, 1976. It would therefore, not be appropriate for the ES to attempt to justify or refute that decision.

The BLM's objective in preparing an ES, as stated in BLM Manual 1792, "is to disclose to the public and the decisionmakers the probable environmental impacts of the proposed action and the alternatives, and to assure that these factors are considered along with economic, technical, and other considerations in the Bureau's decision making process."

10. COMMENT: What effects on health can be anticipated by additional power coming into the Medford valley.

Commentator: Hearing 1

RESPONSE: There would appear to be no adverse impacts on personal health as a result of the powerline. With additional power available in the area certain industries which now burn fossil fuels, with resulting smoke and hydrocarbons injected into the airshed, could convert to electrical energy. The result would be a reduction in smoke and smog concentrations.

Electric energy to operate sewage facilities can improve the areas water quality, which can affect recreational uses downstream from point of discharge.

11. COMMENT: The Draft Statement, in addition to the West Group energy demand projections of December 31, 1974, should incorporate more recent and equally reliable energy demand projections.

Commentators: Nos. 13 and 126; Hearing 62.

RESPONSE: The text has been changed in Chapter I, Purpose and Need.

12. COMMENT: The Draft Statement does not include an adequate analysis and projection for increased electrical demand in Southwest Oregon. Several projection methods for determining electrical demand are available and are not included in the statement.

Commentator: No. 126

RESPONSE: An analysis of the need for increased electric power in southwestern Oregon and specifically the need for the 500 Kv powerline project proposed by Pacific Power and Light has been made by the Oregon Public Utilities Commission. The Oregon PUC conducted two public hearings in Klamath Falls and one in Medford, Oregon. After considering all the available evidence, the commission ruled the project was needed and issued a permit of convenience and necessity May 28, 1976 (Order #76-359).

Bureau of Land Management policy" ...is to disclose to the public and the decisionmakers the probable environmental impacts of the proposed Federal action and the alternatives, and to assure that these factors are considered along with economic, technical, and other considerations in the Bureau's decisionmaking process". Concerning the need for the project, it would not be appropriate for this Bureau to complete a detailed demand analysis which would justify or refute the decision made by the Oregon Public Utilities Commission. Any question of the adequacy of the projected demand for electric power is a concern of the Oregon PUC which is the licensing authority.

APPENDIX A

CLIMATE

Table I shows precipitation data for selected stations in the general area that would be crossed by the proposed transmission line between Midpoint, Idaho and Malin, Oregon.

Table II contains average temperatures and departures from normal for selected stations in the general area of the proposed Midpoint, Idaho to Malin, Oregon transmission line.

Figure I shows mean annual precipitation in the area between Midpoint, Idaho and Malin, Oregon.

Table III shows precipitation data for selected stations between Malin and Medford, Oregon; Table IV shows average temperatures.

APPENDIX A

TABLE 1

TOTAL PRECIPITATION AND DEPARTURES FROM NORMAL

STATION	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
Oregon	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure
Malin	.96		1.01		1.62		.23		1.48		.00				.31		1.22		1.46		3.40		1.07		12.76	
Lakeview	1.38	.46	1.15	.56	1.84	.32	.87	.28	.88	.63	.02	1.26	.18	.04	.33	.16	1.47	.89	1.46	.25	3.59	2.22	2.15	.27	15.32	.88
Adel	1.20		.90		.90		.69		.65		.03		.92		.00		1.05		.78		2.54		1.29		10.95	
Hart	.74		.12		.95		1.04		1.54		.06		.04		.49		1.09		1.19		2.05		1.68		10.99	
Fields									.21		.16		.01		.20		.32		.90		2.44		.76			
Whitehorse Ranch	.96		.27		1.13		1.46		.68		.25		.08		.55		.37		.92		1.56		.95		9.18	
Mc Dermitt	.98		.05		1.56		1.65		1.24		.39				.36		.79		.76		1.34		.25		9.37	
Rome	.64		.13		.27		.71		1.26		.09		.01				.41		.71		.83		1.28		6.34	
Danner	.74	.47	.25	.82	1.20	.17	1.51	.52	.57	.79	.39	.67	.00	.29	.28	.13	1.08	.47	1.16	.26	1.96	.91	1.34	.02	10.48	.56
Idaho																										
Grand View	.75	.04	.36	.22	.52	.39	1.23	.53	.37	.72	.20	.63	.37	.21	.09	.02	.93	.60	.49	.02	1.19	.51	1.01	.32	7.51	.25
Bruneau	.45		.58		.21		.33		.63		.31		.38		.21		.46		.66		.99		1.55		6.76	
Glenns Ferry	1.03	.22	.63	.31	.39	.63	.39	.36	.76	.14	.39	.20	.65	.40	.10	.04	.11	.14	.33	.22	1.88	.83	1.49	.50	8.15	.53
Bliss	1.00	.24	.72	.20	.50	.30	.53	.13	.39	.49	.15	.46	.75	.53	.13	.02	.37	.10	.14	.41	2.24	1.19	2.20	1.09	9.18	.64
Shoshone	1.17	.41	.41	.84	1.52	.54	.22	.57	.41	.58	.60	.04	.46	.24	.23	.01	.37	.06	.10	.64	2.21	1.12	2.15	.80	9.86	.43

Source: U. S. Department of Commerce, N.O.A.A. 1973b, c

APPENDIX A

TABLE 2

AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL

STATION	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
Oregon	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Malin	29.9		36.7		35.0		44.6		55.7		60.3		67.7		64.9		58.2		47.8		35.0		34.6		47.5	
Lakeview	27.2	.0	35.6	4.8	35.1	1.6	43.8	.9	56.6	5.0	60.3	2.2	68.9	2.1	65.7	1.1	58.0	.2	47.5	.5	35.0	2.2	34.4	3.2	47.3	1.1
Adel	29.0		36.8		37.9		46.4		60.3		65.2		71.9		72.5		61.6		50.7		37.9		36.6		50.6	
Hart Mountain Refuge	26.0		33.0		31.3		37.9		51.8		56.6		63.6		61.8		54.8		43.8		34.7					
Fields									61.6		66.4		75.9		71.3		61.1		50.2		38.4		34.5			
Whitehorse Ranch	28.1		35.7		38.2		44.4		58.0		63.2		69.8		68.1		58.7		49.5		39.2		35.3		49.0	
McDermitt	27.9		35.7		36.7		41.8		57.3		64.6		72.4		68.7		58.9		49.5		39.1		35.7		49.0	
Rome	27.9		36.7		38.9		45.6		58.5		66.1		74.6		69.1		59.9		50.0				36.6			
Danner	24.0	1.7	34.3	3.6	37.0	.7	42.4	3.6	55.1	1.6	61.6	1.5	68.0	1.1	65.9	.6	57.1	.8	47.2	.8	34.6	1.6				
Idaho																										
Grand View	31.1	1.7	37.8	2.4	44.9	1.9	51.3	1.4	62.7	1.9	69.6	1.7	75.4	1.1	72.5	.9	62.6	.9	51.3	1.0	42.3	3.3	36.7	4.4	53.2	1.0
Bruneau	32.1		39.0		44.3		50.3		61.9		69.8		76.2		74.2		63.2		52.8		42.5		37.4		53.6	
Glenns Ferry	31.7		37.9		42.3		49.2		61.0		67.6		75.8		43.2		62.7		50.4				36.2			
Bliss	29.6		35.3		41.0		47.9		58.6		66.4		73.8		71.7		61.9		52.1		39.0		35.4		51.1	
Shoshone	24.6	1.5	30.2	2.5	37.9	1.3	46.0	1.5	59.0	3.1	66.6	3.3	74.1	1.2	71.2	1.3					35.7	.1	31.5	3.3		

Source: U. S. Department of Commerce, N.O.A.A. 1973b, c

APPENDIX A

TABLE 3
TOTAL PRECIPITATION AND DEPARTURES FROM NORMAL

STATION	January		February		March		April		May		June		July	
	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure		
Medford	1.98	-1.16	.54	-1.86	1.58	.20	.76	- .30	.45	-1.02	.06	- .96	.04	- .17
Ashland	1.77	-1.01	.45	-1.70	1.88	- .18	1.37	- .07	.53	-1.21	.15	-1.05	.02	- .32
Howard Prairie Dam	5.28		1.26		2.76		1.33		1.36		.15		.01	
Crater Lake	8.74		3.31		6.28		3.38		1.73		1.45		.01	
Klamath Falls	1.17	- .94	.99	- .57	.94	- .30	.16	- .68	.47	- .68	.01	- .94	.20	- .11
Malin	.96		1.01		1.62		.23		1.48		.00		T	

STATION	August		September		October		November		December		Annual	
	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure	Precip. (in)	Departure
Medford	.03	- .15	.64	- .04	2.79	.85	7.01	4.41	3.02	- .36	18.90	- .88
Ashland	.35	.08	.60	- .18	3.12	1.28	5.06	2.53	2.37	- .63	17.67	-2.32
Howard Prairie Dam	.21		1.39		3.95		11.06		5.70		34.46	
Crater Lake	.46		3.83		6.14		24.16		14.58		74.07	
Klamath Falls	.08	- .24	1.11	.43	2.99	1.29	7.57	5.21	3.34	.40	21.88	3.09
Malin	.31		1.22		1.46		3.40		1.07		12.76	

Source: U.S. Department of Commerce, N.O.A.A. 1973

APPENDIX A

TABLE 4

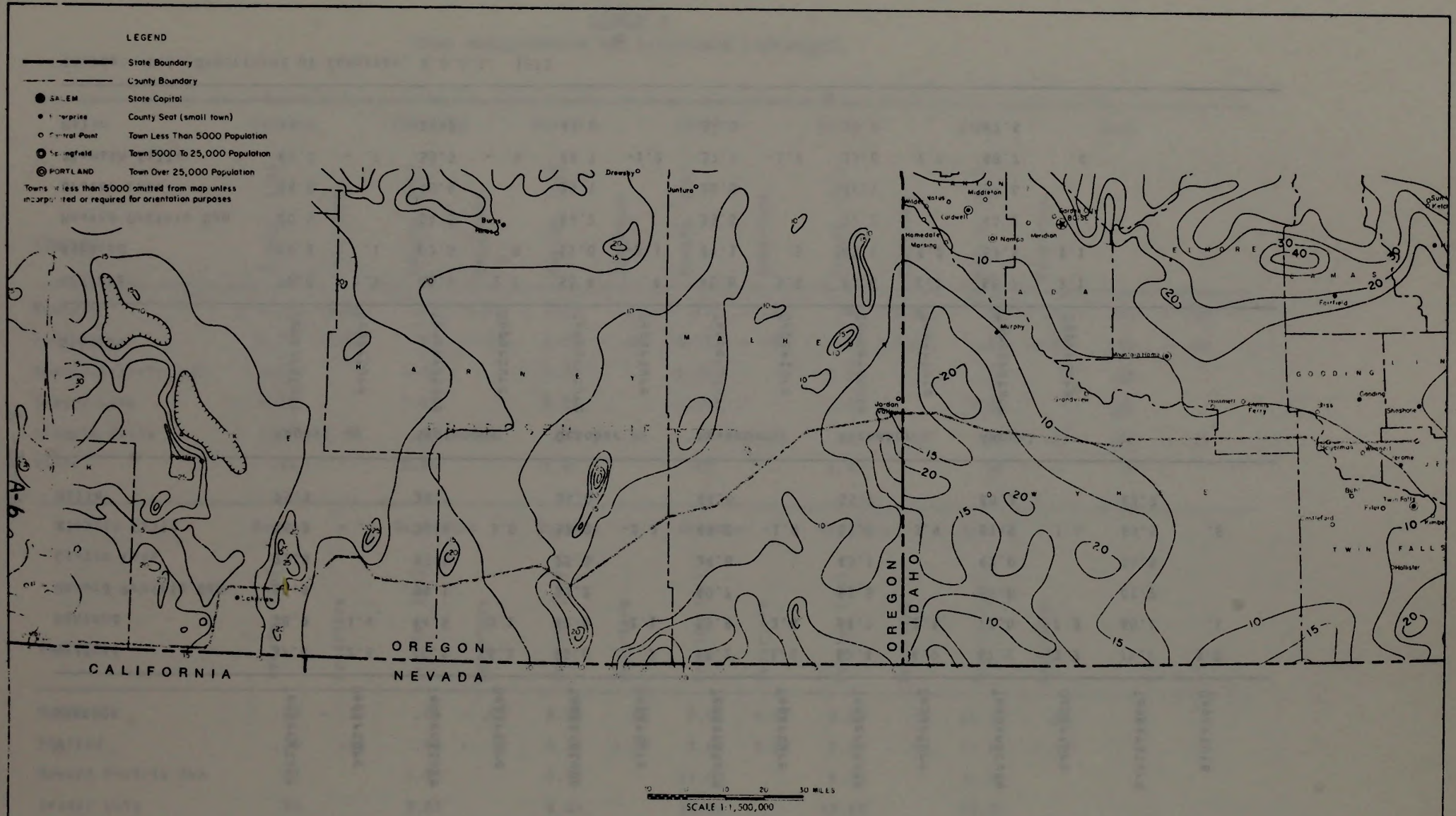
AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL

MALIN TO MEDFORD

STATION	January		February		March		April		May		June		July	
	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Medford	37.9	2.5	46.2	6.1	45.0	.7	52.1	1.5	62.4	4.9	67.5	3.3	75.2	3.2
Ashland	38.9	1.4	44.5	3.1	42.6	-1.1	59.9	3.4	64.7	2.5	72.0	2.9	68.1	.1
Howard Prairie Dam	26.9		34.1		33.2		40.7		51.5		55.8		62.2	
Crater Lake	21.6		27.5		25.3		34.0		43.1		47.0		56.5	
Klamath Falls	28.9	- .5	36.8	3.0	37.2	-2.3	45.5	-1.4	57.6	3.9	61.9	1.8	69.5	.8
Malin	29.9		36.7		35.0		44.6		55.7		60.3		67.7	

STATION	August		September		October		November		December		Annual	
	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure	Temperature	Departure
Medford	72.0	1.3	66.9	2.7	53.4	.4	45.8	3.4	43.6	6.7	55.7	3.1
Ashland	68.1	.1	63.5	.8	51.0	-2.1	44.1	.3	43.1	4.2	53.5	1.1
Howard Prairie Dam	60.5		54.5		44.7		33.5		32.2		44.2	
Crater Lake	54.8		48.9		39.1		26.5		26.1		37.5	
Klamath Falls	66.2	- .7	59.5	- .9	48.7	-1.3	37.1	-1.4	35.0	2.8	48.7	.4
Malin	64.9		58.2		47.8		35.0		34.6		47.5	

Source: U.S. Department of Commerce, N.O.A.A. 1973



MALIN-MIDPOINT TRANSMISSION PROJECT

MEAN ANNUAL PRECIPITATION

SOURCE: U.S. DEPARTMENT OF COMMERCE, N.O.A.A. 1973A, B

APPENDIX A

FIGURE 1

APPENDIX B

BUREAU OF LAND MANAGEMENT RECREATION INFORMATION

SYSTEM - SCENERY EVALUATION CRITERIA

GENERAL CLASSIFICATION OF ESTHETIC VALUE

Quality Evaluation Chart
SCENERY

KEY FACTORS	RATING CRITERIA AND SCORE		
(1) LAND FORM	Vertical or near vertical cliffs, spires, highly eroded formations, massive rock outcrops, severe surface variation. 4	Steep canyon walls, mesas, interesting erosional patternsn, variety in size & shape of land forms. 2	Rolling Hills, foothills, flat valley bottoms. 1
(2) COLOR	Rich color combinations variety or vivid contrasts in the color of soil, rocks, vegetation or water. 4	Some variety in colors and contrast of the soil, rocks & vegetation, but not dominant. 2	Subtile color variations, little contrast, generally muted tones. Nothing really eye-catching. 1
(3) WATER	Still, chance for reflections or cascading white water, a dominant factor in the landscape. 4	Moving and in view of still but not dominant. 2	Absent or present but seldom seen. 1
(4) VEGETATION	A harmonious variation in form, texture, pattern, and type. 4	Some variation in pattern and texture, but only one or two major types. 2	Little or no variation, contrast lacking. 1

(1) Land Form or topography becomes more interesting as it gets steeper and more massive. Examples of outstanding land forms are found in Grand Canyon, the Sawtooth Mountain Range in Alaska, Rocky Mountain National Park, etc.

(2) Color. Consider the overall color of the basic components of the landscape (i.e., soil, rocks, vegetation, etc.) as they appear during the high use season. Key factors to consider in rating "color" are variety, contrast, and harmony.

(3) Water is that ingredient which adds movement or serenity to a scene. The degree to which water dominates the scene is the primary consideration in selecting the rating score.

(4) Vegetation. Give primary consideration to the variety of patterns, forms, and texture created by the vegetation.

KEY FACTORS	RATING CRITERIA AND SCORE		
(5) UNIQUENESS	One of a kind or very rare within region. 6	Unusual but similar to others within the region. 2	Interesting in its setting, but fairly common within the region. 1
(6) INTRUSIONS	Free from aesthetically undesirable or discordant sights and influences. 2	Scenic quality is somewhat depreciated by inharmoneous intrusions but not so extensive that the scenic qualities are entirely negated. 1	Intrusions are so extensive that scenic qualities are for the most part nullifies. -4

A = 15-24 B = 10-14 C = 1-9

Source: U.S.D.I. Bureau of Land Management Manual 1611

(5) Uniqueness. This factor provides an opportunity to give added importance to one or all of the scenic features that appear to be relatively unique within any one physiographic region. There may also be cases where a separate evaluation of each of the key factors does not give a true picture of the overall scenic quality of an area. Often it is a number of not so spectacular elements in the proper combination that produces the most pleasing scenery -- the uniqueness factor can be used to recognize this type of area and give it the added emphasis it needs.

(6) Intrusions. Consider the impact of man-made improvements on the aesthetic quality. These instructions can have a positive or negative aesthetic impact. Rate accordingly.

APPENDIX C

FOREST SERVICE VISUAL MANAGEMENT SYSTEM-
ESTHETIC SENSITIVITY CRITERIA

GENERAL CLASSIFICATION OF LANDSCAPE SENSITIVITY

Class 1	Class 2	Class 3
Landscapes viewed from PRINCIPAL travel routes, public use areas, and water bodies with either: (a) a primary function of serving users who have a major interest in scenic qualities, as indicated by 75 percent recreational traffic or usage. Landscapes viewed from MINOR travel routes, public use areas, and water bodies with a primary function of serving users who have a major interest in scenic qualities, as indicated by 75 percent recreational traffic or usage.	Landscapes viewed from PRINCIPAL TRAVEL routes, public use areas, and water bodies not included in Class 1. Landscapes viewed from MINOR travel routes, public use areas and water bodies with a secondary function of serving users who have a major interest in scenic qualities, as indicated by between 25 percent and 75 percent recreational traffic or usage. Landscapes viewed from urban areas and other smaller communities.	Landscapes viewed from MINOR travel routes, public use areas, and water bodies with little function to serve users who have a major interest in scenic qualities, as indicated by less than 25 percent recreational traffic or usage. Landscapes unseen from any travel route, public use area, or water body.

Source: U.S.D.I., Forest Service, Visual Management System, undated.

APPENDIX D

Letters received containing comments relative to the Draft Statement follow:

ROBERT W. STRAUB
GOVERNOR

Department of Transportation
PARKS AND RECREATION BRANCH
525 TRADE STREET S.E., SALEM, OREGON 97310

1

September 8, 1976

E. J. Peterson
Acting State Director
Bureau of Land Management
Oregon State Office
P.O. Box 2965
Portland, OR 97208

Dear Mr. Peterson:

Our office has carefully reviewed the Draft Environmental Impact Statement for the Pacific Power and Light Company proposed 500 KV powerline from Midpoint, Idaho to Medford, Oregon. We offer the following comments.

The sections dealing with cultural resources are not adequate. Archeology appears to be adequately dealt with in Oregon, and the Bureau of Land Management is no doubt aware of the possible impacts on these features and the necessary mitigating measures. Unfortunately, history is not dealt with in the same professional manner.

To have adequately covered history within the area, the BLM should have hired professional historians to conduct survey work of the area and its history. A number of important historical events occurred in the area and there should be evidence either on the ground or in literature of these events. There were early explorations of the area, fur trapping in the early 1800s, mining activities to the north with trade routes that criss-crossed the powerline construction area, cattle and sheep ranching, military operations in the late 1800s, and most important, the Oregon Trail emigration. None of these activities have been adequately discussed or identified within the Draft Environmental Impact Statement.

The historical sites discussed in the text have little meaning because there are no descriptive materials and no statements of significance. The three variables of high, medium and low importance have no meaning because no criteria are listed to explain the difference between the three.

Over the past year and a half our office has had several conversations with the BLM regarding historical survey work along the powerline route. We made further comment by letter on March 17, 1976 discussing the inadequacies in historical survey work and suggesting that survey work be conducted. We feel that the BLM has been adequately informed that historical survey work is necessary and until this work is done we are unable to comment on the Draft Environmental Impact Statement.

Sincerely,

Paul B. Hartwig

Paul B. Hartwig
Historical Programs Coordinator
State Historic Preservation Office

PBH:gp

IN REPLY REFER TO:

Land Services

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
PORTLAND AREA OFFICE
POST OFFICE BOX 3785
PORTLAND, OREGON 97208

2

SEP 14 1976

Memorandum

To: Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

From: Office of the Area Director

Subject: Review of Draft Environmental Statement, Pacific Power and Light Company, Proposed 500 kV Powerline, Midpoint, Idaho-Medford, Oregon (No ER Number)

After review by our office, it has been determined that no Indian trust lands or Indian communities will be directly impacted by the proposed project. Therefore, we have no comments and no objections to the proposal.

Assistant Area Director
(Economic Development)

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

STATE OF IDAHO

RECEIVED
BUREAU OF
LAND MANAGEMENT
OCT 7 10 AM '76
STATE OFFICE
PORTLAND, OREGON

DEPARTMENT OF FISH AND GAME

REGION 3
109 WEST 44TH
GARDEN CITY, IDAHO 83704

October 5, 1976

11

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Sir:

The draft environmental impact statement on Pacific Power and Light Company's proposed 500 KV powerline from Midpoint, Idaho to Medford, Oregon has been reviewed by the appropriate personnel in this Department.

We are opposed to the Idaho portion of this route and have expressed that opinion to your office in previous correspondence dated April 29, 1975. We have also testified against the proposed line before the Idaho Public Utilities Commission on September 7-8, 1976.

As proposed, the route would be in conflict with recently adopted multiple use plans. It is our position that the line should be constructed within the existing transmission corridor designated by the Boise District of the Bureau of Land Management in the West Owyhee Management Framework Plan.

In essence, if the proposed route is approved it would nullify the BLM Land Use Plan already adopted. Pacific Power and Light has ignored the decision made in the Management Framework Plan even with favorable public input towards establishing a transmission line corridor that was received in the planning process.

Since 64% of the proposed line crossed federal land, we feel Pacific Power and Light's application should be carefully scrutinized to look out for the public interest. The final route selection should be chosen to least minimize the impacts.

The prime route selection study done by VTN Oregon, Inc. for Pacific Light and Power was well done and did consider adverse impacts. However, the selected route is not "non-controversial" as VTN implies. Considering the objective analysis VTN used, the route is the best one for the company in terms of economics.

After analyzing the prime route selection study proposed by VTN and the Environmental Assessment prepared by Pacific Power and Light, we offer the following discussion to negate the "non-controversial" rating applied to the proposed line by VTN and Pacific Power and Light.

The Western Idaho portion of the line crosses an area which the Idaho Department of Fish and Game, as a management decision, has attempted to preserve for a "quality-type" hunting experience. "Quality-type" meaning the preservation of limited or poor access into the area in order to insure fewer hunters per square mile than in other areas that are laced with roads.

The proposed line passes close to Treasure Valley, the state's major population center, and the Department is concerned about any increased access that might result from the construction of a transmission line maintenance road in connection with this project. We believe that any additional access roads into the area would have an adverse impact upon the areas wildlife resources.

Currently, there is one primitive road which provides access for hunters during the dry months, but the road does not provide good access during inclement weather. Any road that would allow access by four-wheel drive vehicles on a year-round basis is unacceptable. The maintenance road proposed by Pacific Power and Light Company would have to be good enough to enable maintenance crews to enter the area and repair lines in winter or during inclement weather. If a road of that quality is introduced into the area, it will no longer lend itself to management as a primitive area. The "quality-type" hunting experience now provided would be diminished.

The major game animal with which we are concerned in the area is mule deer. However, there are also a few remaining elk and a good population of antelope. Chukars and sage grouse are the major upland game species. As for mule deer, the Department feels that the area is saturated with hunters right now, and we do not believe that it can sustain any more hunting pressure and still keep the relative framework of hunting season, which is now five (5) days. The maximum number of mule deer that can be harvested are now being taken each year.

The Department does not feel that attempting to close the road to all but authorized entry will serve to effectively deter hunters. Our past experience with attempted road closures has shown us that roads have proven very difficult to close physically. Whether gated, blocked with logs, or rocks, or even if a bulldozer has dug a "tank trap," unless the closures are expertly constructed in terrain with an extremely steep cutbank, people can find their way around them. In isolated areas, it is a simple matter for people with four-wheel drives, winches, chain saws, and/or chain cutters to get around a road closure. And once one person gets around the closure it becomes "an invitation" for someone else to do the same.

Pacific Power and Light's proposed route goes right through the middle of a major deer wintering area. The area extends from Triangle all the way south to the foothills above the town of Jordan Valley in Oregon. This area is a major winter range for mule deer coming off South Mountain and out of the Silver City range and includes all the area around Boulder Creek, Flint Creek and the lower end of Jordan Creek. The Department opposes any disturbance of this natural habitat such as would result from this proposed transmission line. The potential for adverse impact is particularly severe if there is any actual construction in this area during the winter months.

The Department favors the use of existing utility corridors, or if none are in existence, long range planning for corridors when transmission lines are first constructed. This would minimize the past proliferation of lines constructed primarily for the convenience of the utility company concerned and not necessarily what was best for the public or the land and wildlife resource.

Attached is an exhibit presented by Pacific Power and Light as evidence at the September 8, 1976 hearing before the Idaho Public Utilities Commission. The abstract was all that was made available. Pacific Power and Light attempted to use this as a rebuttal for the corridor concept. The portion underlined was read into the testimony by John Cheek, Pacific Power and Light Planning Coordinator for the proposed project. Upon closer examination one can readily see that the conclusions of the study were taken out of context by Pacific Power and Light and that in fact the study supports the corridor concept.

In testimony before the Idaho Public Utilities Commission on September 8, 1976, the Department recommended that Pacific Power and Light not be given a Certificate of Public Convenience and Necessity to construct this 500 KV transmission line along the route in Idaho that they have proposed. And further, when the line is constructed, we recommend that the line follow Idaho Power's existing lines where possible utilizing a route similar to Alternative No. 1 as listed in your draft environmental impact statement.

Overall, we found the draft to be complete and offer the following minor corrections and additions:

1. The spelling of bighorn sheep is erroneous. Technically, usage is not bighorned sheep. It is spelled improperly in at least a dozen places and on Map A-2.

2. Page II-87, paragraph 1. The population of bighorn sheep in the Jacks Creek area is closer to 75, not 100.

3. Page II-140, paragraph 3. In the packet we received there were no Maps A-4 and B-4. We presume you mean A-3 and B-3.

4. Page II-148, paragraph 1. In our opinion the Owyhee Mountains definitely receive heavy deer hunting pressure. There should be no doubt in the reader's mind.

5. Page III-102, paragraph 3, line 5. We feel the estimate of 2,000 people visiting the area is quite low. During the 1974 hunting season 5,072 hunters were checked in two days at check stations run at Marsing and Walter's Ferry. The vast majority of these people hunted in the vicinity of South Mountain, Indian Meadows, Boulder Creek, and Silver City. In 1975, 4,034 hunters were checked in five days at the same station. We would estimate the number of people visiting the area at closer to 6,000.

6. Page III-102, paragraph 5, line 3. We assume that the 991 figure is the number of hunters who voluntarily returned report cards from the area. A more accurate figure would be 5,132 hunters checked through the Marsing and Walter's Ferry and Jordan Valley check stations.

7. Page IV-1. The entire chapter, Mitigating Measures, is excellent. A lot of planning and effort went into this section.

8. Page IV-13, #25. If at all possible, we feel the towers should be painted to blend into whatever environment they pass through. The BPA line from Dworshak Dam that crosses the foothills north of Lewiston, Idaho is a good example. The towers are painted a dull yellow color to blend into the dried bunchgrass and cheatgrass landscapes. From a distance they are very difficult to see.

9. We note the usage of the term kids applied to antelope young. This is not correct. Antelope young of the year are technically referred to as fawns.

In summary, we feel that Pacific Power and Light has spent considerable amount of time and money selecting a route that best serves the company's interests and their customers in Oregon and California. Although we realize that no route can be free of conflicts, we feel a better route can be designed that has less ecological and environmental impacts. The right-of-way through Idaho granted by the Bureau for any line should be where the agency feels it will best serve the public, the resources and Pacific Power and Light.

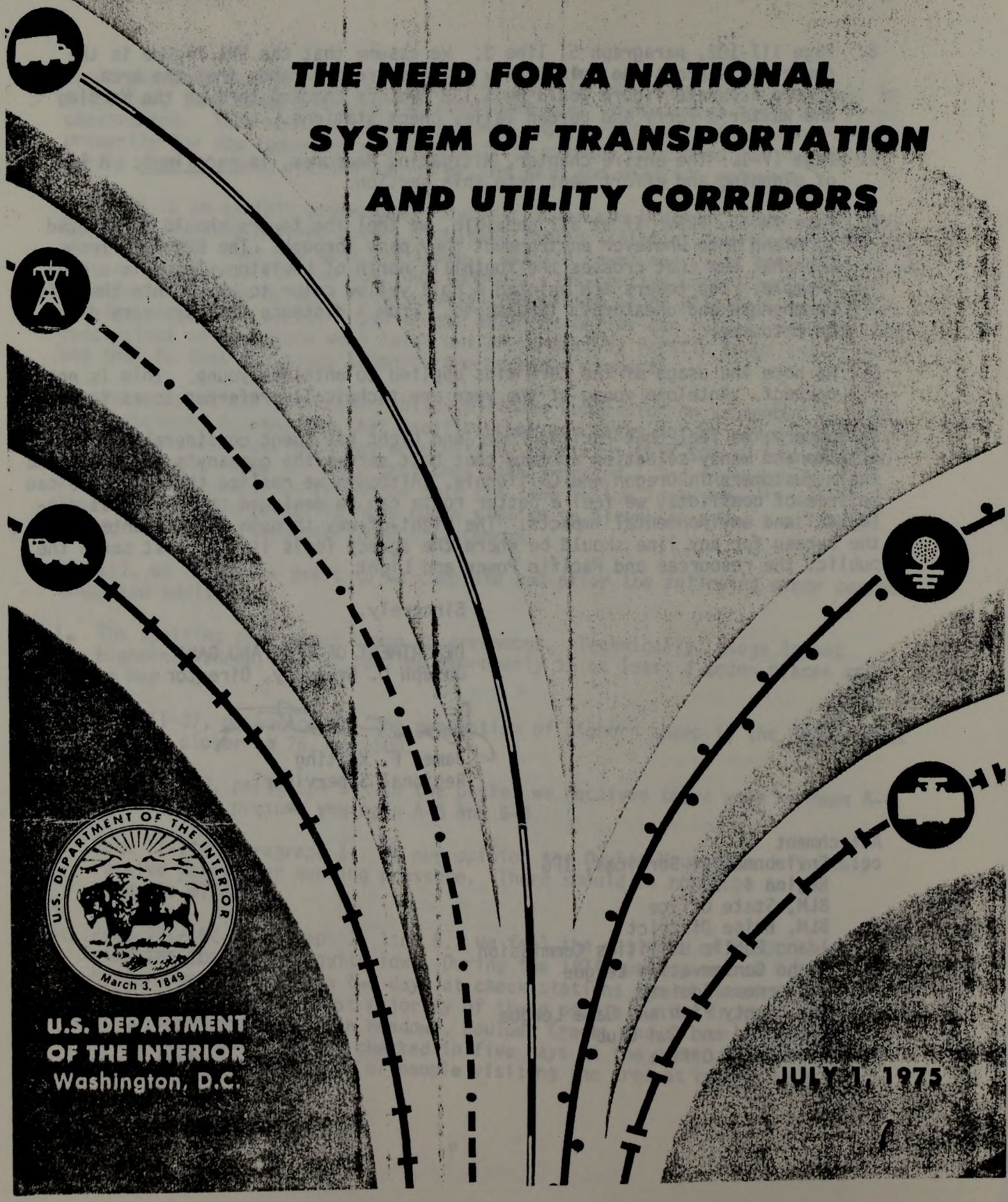
Sincerely,

DEPARTMENT OF FISH AND GAME
Joseph C. Greenley, Director

James F. Keating
Regional Supervisor

Attachment
cc: Environmental Services, IFG
Region 4, IFG
BLM, State Office
BLM, Boise District
Idaho Public Utilities Commission
Idaho Conservation League
Wilderness Society
Ada County Fish and Game League
Nampa Rod and Gun Club
Governor's Office

THE NEED FOR A NATIONAL SYSTEM OF TRANSPORTATION AND UTILITY CORRIDORS



U.S. DEPARTMENT
OF THE INTERIOR
Washington, D.C.

JULY 1, 1975

ABSTRACT

At the request of Congress, the Department of the Interior, Bureau of Land Management (BLM), studied the necessity and desirability of establishing a national system of transportation and utility corridors across Federal lands. Because of the high percentage of Federal lands and the concentration of indicated future right-of-way needs there, the study focused on lands west of the 100th Meridian (the approximate centerline of the continental United States).

Five major transportation and utility systems were examined: highway and railroad systems; electrical transmission systems; communication systems; and pipelines. Comments and contributions were solicited from Federal, State, and local government agencies, industry, and public-interest groups such as conservationists, preservationists, and the like. Without exception, their comments and criticisms were constructive and did much to add impetus to the study.

Two types of corridors were studied, each representing an extreme of corridor design: joint-use corridors, and planning corridors. Joint-use corridors are narrow, have fixed boundaries, and may contain more than one transportation or utility system, such as a gas pipeline and electrical transmission lines. Unlike joint-use corridors, planning corridors are more expansive, have flexible boundaries, and are a product of area or regional land-use plans, hence their name. Both types of corridors offer advantages and disadvantages which were weighed in the study.

What the study revealed is that in order to minimize ecological and environmental impacts and the proliferation of rights-of-way on Federal land, and at the same time develop and distribute much-needed new energy sources, a certain degree of flexibility will be needed when planning for corridors. Planning corridors, despite some obvious shortcomings, appear to be the most optimum action to take, In some instances, joint-use rights-of-way may also be appropriate, all factors considered, but depend upon the assessment of specific projects and individual siting circumstances. It was determined that the establishment of a national system of joint-use corridors in advance of specific project proposals is unfeasible.

In short, establishing a national system of transportation and utility planning corridors, as defined in this study, is feasible, desirable, and needed. Yet, as this study revealed, there is insufficient information from which to make an informed and intelligent decision as to how and where such a national system should be implemented. Until further statistical, technological, and environmental data are available from government, industry, and the public sector, corridor

decisionmaking must continue on an ad hoc basis. Whenever an adequate baseline of information has been gathered and analyzed, a national policy can be articulated, and a national system of transportation and utility planning corridors can be established -- a system which will provide the optimum benefits to the public, to industry, and to the country.

The Wilderness Society

Dan Lechefsky, Field Representative
PO Box 1166, Boise, Idaho 83701
Phone (208) 344-1331

October 6, 1976

Oregon State Director
Bureau of Land Management
Oregon State Office
PO Box 2965
Portland, Oregon 97208

13

Dear Sir:

The Wilderness Society is happy to provide the Bureau of Land Management with the following comments pertaining to the proposed 500 KV transmission line between Midpoint, Idaho, and Medford, Oregon.

As a matter of introduction, The Wilderness Society is a national citizen's organization dedicated to the preservation of America's vanishing wild lands and waters. Our 65,000 members believe that wilderness is a valuable natural resource that belongs to the people, and that its preservation -- for educational, scientific, recreational, and inspirational use -- is part of a balanced conservation program essential in the survival of our civilized culture.

The proposed transmission project would pass through several remote and highly-scenic areas in Idaho and Oregon which have been formally recognized by the Bureau of Land Management for their wilderness characteristics. None of these areas have as yet been granted full statutory or administrative protection from development. However, in some of these areas -- particularly the Boulder Creek and Toy Mountain Back Country Study Areas in Idaho -- the Bureau has previously committed itself to further analysis in order to determine their suitability for special protective management in the future.

The Owyhee Mountains, which are of particular concern to us when discussing the proposed 500 KV line, currently provide substantial public recreational benefits. The proximity of the Owyhee Mountains to growing population centers in Boise, Nampa, and Caldwell makes them especially attractive to outdoor enthusiasts, and their popularity can be expected to grow. The Owyhee country offers some of the best deer and game bird habitat left in southwestern Idaho, owing largely to its remoteness and lack of development.

We urge the Bureau of Land Management, in making its decision to grant or deny the proposed right-of-way, to pay special attention to the following questions, all of which were inadequately treated in the Draft Environmental Impact Statement:

1. How well does the proposed line, or any of the alternatives to the proposed line, fit into our nation's energy plan?

   This question is, of course, unanswerable. Our nation doesn't have an energy plan -- nor do the states of Oregon, Idaho, and Wyoming. The Wilderness Society is deeply concerned about the poorly coordinated, haphazard development of utility facilities, particularly in the Pacific Northwest. We urge that the Bureau devote a section of the Final EIS to a full discussion of the relationship of the proposed line and alternatives to future planned utility developments within the Northwest Power System.

2. Assuming there is a legitimate need to transmit additional power from Wyoming to Oregon, would not the simplest, most logical, and certainly the most environmentally-acceptable method be to upgrade existing transmission lines to Brownlee, and then to construct additional lines, where needed, in Oregon?

   We can foresee the day when many existing lines will be upgraded because of growing power transmission demands. It makes sense to upgrade existing lines before constructing new projects. Our failure to do so can only result in new power lines being constructed everywhere.

3. Assuming that at some future time we will find a legitimate need for a new utility corridor across southern Idaho, is the proposed route alignment, or any of the alternative alignments, well-adapted to additional future utility projects; i.e., additional power lines or pipelines?

   In the absence of regional and national energy plans, one can only assume that at some point in the future, cross-country power lines and pipelines in addition to the proposal may be constructed across southern Idaho. Where will these go? Will we locate an appropriate utility corridor now, and limit future utility development to that corridor? Or will we continue to construct transmission lines seemingly at random, and ruin our vanishing wild areas in the process?

4. How much credence is the public expected to give the Bureau's Management Framework Plans? That is, how seriously does the Bureau of Land Management take its own West Owyhee MFP?

   The Boise District of the Bureau formally declared in the West Owyhee MFP that (a.) the Boulder Creek and Toy Mountain Back Country Study Areas would be managed so as to protect their backcountry atmosphere until such time as more definite management guidelines could be established, and (b.) a utility corridor would be established, essentially along the alignment of Alternative Route II in the Draft EIS, within which all future cross-country utility development through the West Owyhee Planning Unit would be confined.

The question, then, is one of sincerity and commitment: what is a Management Framework Plan really worth? And how much will the Bureau bend from its own management objectives?

5. Who should pay for the social and environmental costs of new utility development -- the owners, and users, of the public lands, or the utility and its customers?

   This admittedly is a philosophical question at present. Pacific Power and Light Company, and presumably its future customers in southwestern Oregon and northern California, are asking the general public to allow significant environmental degradation on public lands in order to accomodate presumed local energy needs. The public -- particularly the users of the Owyhee Mountain region and other wild areas in Oregon -- is being asked to give up something of inestimable value in order to provide a straight, cheap, transmission line which will offer significant benefits to only a small portion of Oregon and California.

   Who is being asked to pay for what?

6. Do we really need a Midpoint-Medford transmission line at this point in time?

   Neither Pacific Power and Light Company nor the Bureau have provided the public with adequate information on the subject of need. The Bureau's Draft EIS -- which we warmly applaud as an excellent initial effort to analyze the proposed project -- offers little proof of immediate need for the proposal.

   We realize that figures provided in the Draft EIS suggest that southwest Oregon will be energy-deficient by 1978. However, this conclusion is based on the so-called West Group enery-demand projections of December 31, 1974. The West Group forecast has been severely criticized by numerous energy authorities as being too liberal in projecting energy growth rates in the Pacific Northwest. We urge the Bureau to incorporate more recent, and at least equally-reliable, energy-demand projections in its discussion of need in the Final EIS.

Attached please find a copy of our testimony before the Idaho Public Utilities Commission regarding Pacific Power and Light Company's application for a certificate of public convenience and necessity. The testimony expands upon many key points which which we have only briefly touched in this letter. We hope the Bureau will include the attached testimony in the Final EIS, as it offers information which we feel will be essential to the Bureau as it moves toward a decision to either grant or deny the proposed right-of-way.

In summary, The Wilderness Society urges the Bureau of Land Management to deny Pacific Power and Light Company's present

request for a right-of-way across public lands. We believe that the Owyhee Mountains and other wild areas in Oregon are too valuable to be developed for utility purposes.

Preferable alternatives to the proposal do exist, and we urge that they be utilized to the fullest extent possible. We hope that the Bureau of Land Management, the Idaho and Oregon Public Utilities Commissions, and Pacific Power and Light Company will look more closely at the upgrading of existing transmission lines to provide for Oregon's energy needs.

Sincerely,

Dan Lechefsky

Dan Lechefsky
Field Consultant

Attachment

cc: Idaho State Office BLM
Boise District BLM

The Wilderness Society

Dan Lechefsky, Field Representative
PO Box 1166, Boise, Idaho 83701
Phone (208) 344-1331

TESTIMONY OF DAN LECHEFSKY
Representing
THE WILDERNESS SOCIETY
At the request of the
IDAHO CONSERVATION LEAGUE
Intervening before the
IDAHO PUBLIC UTILITIES COMMISSION
In
CASE NO. U-1046-62
Regarding
AN APPLICATION BY THE PACIFIC POWER AND LIGHT COMPANY TO CONSTRUCT AND MAINTAIN A 500 KV TRANSMISSION LINE THROUGH SOUTHWEST IDAHO

Q. Please state your name, position, and business address for the record.

A. My name is Dan Lechefsky. I am the Idaho Field Representative for The Wilderness Society. Our Idaho Office is located at 603 West Franklin Street, Boise, Idaho.

Q. Are you authorized to speak on behalf of The Wilderness Society?

A. Yes. I have been authorized by Mr. Clifton R. Merritt, Western Regional Director for The Wilderness Society in Denver, Colorado, to speak on all matters involving or affecting wilderness, scenic, and recreation resources in Idaho.

Q. Please describe your education and experience.

A. I graduated from the State University of New York College of Forestry in 1972 with a Bachelor of Science degree in Forest Botany and Silviculture. I attended the University of Nevada at Reno from 1972 to 1974, during which time I received grad-

uate training in Range Management and Wildland Recreation Management.

Since 1974 I have worked as a Ranger-Naturalist for the National Park Service at Devils Tower National Monument in Wyoming, and as a Landscape Technician for the Lakeridge Development Corporation in Reno, Nevada.

I have been employed full-time by The Wilderness Society since March, 1975. In my present capacity I devote much of my time to reviewing land use plans and project proposals which would affect wilderness, scenic, and recreation resources in Idaho.

Q. Mr. Lechefsky, are you familiar with Pacific Power and Light Company's proposal to construct and maintain a 500 KV transmission line through southwest Idaho?

A. Yes. I have reviewed the Environmental Assessment prepared by Pacific Power and Light Company for the proposed 500 KV transmission project. I have examined most of the proposed route from the air, and I have further examined portions of the proposed route on the ground. I have discussed this proposal with numerous sportsmen and other citizens familiar with the area through which the route would pass, and thus I have had the benefit of their information and experience.

I also have reviewed the West Owyhee Management Framework Plan, prepared by the Boise District of the Bureau of Land Management, which is a land use plan prescribing management goals and objectives for the Federal lands through which the westernmost one-third of the proposed transmission line in Idaho would pass.

In addition, I have reviewed portions of the Draft Environmental Impact Statement prepared by the Bureau of Land Management for the proposed 500 KV transmission line. I did not receive a copy of this exhaustive 720-page study until the last week in August, 1976, and I therefore have had insufficient time to review it in its entirety.

Q. Would you briefly describe the interest of The Wilderness Society in the transmission line being proposed by Pacific Power and Light Company?

A. The Wilderness Society is an educational, non-profit, national conservation organization formed in 1935, and registered under the District of Columbia's Charitable Registration Act. Our basic organizational objective is to inform the public and its agencies of the wilderness, scenic, and recreation resources and values of our public lands, and to advocate the protection of such resources and values in the public interest.

With respect to the proposed Pacific Power and Light Company transmission line, our main concern is that the line be constructed so as to avoid or minimize adverse impacts on wilderness, scenic, and recreation resources in both Idaho and Oregon. For the purposes of this hearing, I will limit my remarks to the Idaho segment of the proposed line.

Q. Is The Wilderness Society concerned about the entire Idaho segment of the proposed transmission line, or with particular portions of the Idaho segment?

A. We recognize that the entire proposed project will cause some adverse impacts on wilderness, scenic, and recreation values, wherever such values occur. However, we are primarily concerned

about the anticipated effects of construction, operation, and maintenance of the proposed transmission line, and its attendant roads, upon the wilderness, scenic, and recreation resources found within the Owyhee Mountains and the Jordan Creek drainage.

Q. Would you define "wilderness?"

A. Yes. The most commonly-accepted definition of wilderness is that contained in the Wilderness Act of 1964, Public Law 88-577, which states: "A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."

Q. Mr. Lechefsky, in your opinion, would the applicant's proposed transmission line pass through any areas which possess the basic characteristics of wilderness?

A. Yes. The applicant's proposed transmission line, in crossing the Owyhee Mountains and descending the Jordan Creek drainage, would pass through an extensive area of southwestern Idaho which is highly scenic and relatively undisturbed by man. Portions of the proposed line would pass through two areas which generally appear to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable, and which presently offer outstanding opportunities for solitude or a primitive and unconfined type of recreation.

These latter two areas have been designated by the Boise District of the Bureau of Land Management as Back Country Study Areas, and are delineated on Map A-3 in the Appendix to the Bureau's recently-published Draft Environmental Impact Statement on the proposed transmission line.

Q. Would you briefly describe these two Back Country Study Areas?

A. Yes. Following the proposed transmission line westward after it leaves Midpoint, the first such area to be encountered is known as the Toy Mountain Back Country Study Area. This area lies near the crest of the Owyhee Mountains, and encompasses portions of the Birch Creek and Castle Creek drainages. The applicant's proposed route would essentially pass through the middle of this Back Country area.

The Toy Mountain Back Country Study Area is characterized by high, wind-swept ridgetops and several small but picturesque canyon bottoms. Because of the open nature of the topography and vegetation, the proposed transmission line would be highly visible from many points within and surrounding the area.

The construction and maintenance roads associated with the proposed transmission line would provide access to portions of the Toy Mountain Back Country Study Area which presently lack roads. In addition, because of the open and, in some cases, gentle nature of the topography, any new road would provide "jumping off points" from which motorized recreation vehicles could travel cross-country, thus gaining access to additional areas. It is exceedingly unlikely that the effects of such increased access could be prevented or mitigated.

The second such area to be affected is known as the Boulder Creek Back Country Study Area. This area is lower in elevation than the Toy Mountain area, and is characterized by scattered stands of juniper and sagebrush. The Boulder Creek Back Country Study Area is topographically complex, being incised by numerous small but spectacular canyons. Stringers of aspen or cottonwood occupy many of the canyon bottoms, providing an exceptional display of color during the autumn months. The Boulder Creek drainage is popular with many Boise-area big game hunters, owing in part to its remoteness and the quality of its big game habitat.

The proposed transmission line would cross the Boulder Creek Back Country Study Area at its northern extremity, near the confluence of Boulder Creek with Jordan Creek. The proposed line and the accompanying roads would degrade a very scenic and inaccessible portion of the Boulder Creek drainage. The effects of the line and the associated roads would be similar to the effects I mentioned previously, in my description of the Toy Mountain Back Country Study Area.

Q. Mr. Lechefsky, in your opinion, is there any significance in the fact that the Boise District of the Bureau of Land Management has designated these two areas as Back Country Study Areas?

A. Yes. These areas were so designated by the Boise District of the Bureau of Land Management during the preparation of the West Owyhee Management Framework Plan. This Plan is, in essence, a land use plan, and thus allocates land and resources to various types of management. The land encompassed by the boundaries of the Toy Mountain and Boulder Creek Back Country Study Areas has been formally recognized by the Bureau of Land Management for its potential to provide the public with opportunities for primitive and unconfined recreation.

I am offering, as Exhibit A, a copy of an Instructional Memorandum from the Idaho State Director of the Bureau of Land Management to all District Managers. This memorandum, dated November 15, 1973, and the attached Proposed Management Guidelines for Back Country Areas in Idaho, indicate the Bureau's general desire to maintain and enhance the primitive and undeveloped character of Back Country Areas. The Proposed Management Guidelines include the following, found on Page 3:

"No new improvements will be installed which require the operation of heavy equipment.

Any right-of-way corridors, pipe lines, canals, etc. should be routed around the area if possible. Communications sites would be in conflict with back country management."

In summary, I believe it clearly was the intention of the Boise District of the Bureau of Land Management to discourage and prohibit the installation of projects such as the proposed

500 KV transmission line within the Toy Mountain and Boulder Creek Back Country Study Areas.

Q. Would you summarize the impacts of the proposed transmission project which are of the most concern to you?

A. Briefly, The Wilderness Society is concerned about both the aesthetic and biologic impacts of the proposed transmission line and its associated construction and maintenance roads.

The aesthetic impacts would be due to the construction and maintenance of the proposed transmission line and roads in a remote, highly scenic, and little-developed region of southwest Idaho. Degradation of the aesthetic quality of the Owyhee Mountains would discourage many people from using this area for recreation, and would have the resultant side-effect of causing more recreationists to use other already-crowded primitive recreation areas, such as the Sawtooth Wilderness.

Recent statistics from the U.S. Interior Department's Bureau of Outdoor Recreation indicate that participation in outdoor recreation has risen substantially during the past decade. The increase in participation has been most noticeable for camping in remote areas. The U.S. Forest Service, in its 1975 Assessment of the Nation's Renewable Resources, has projected that the demand for dispersed types of camping is expected to increase 90 per cent by the year 2020.

The proximity of the Owyhee Mountain region to population centers in Boise, Nampa, and Caldwell, all of which are growing, would make such nationwide projections especially pertinent.

The biologic impacts of the proposed transmission line and roads would be most dependent on the degree to which the roads can be closed following construction. It is extremely unlikely that new construction and maintenance roads can be effectively closed to motorized traffic. The very nature of the topography and vegetation along the proposed route is such that motorized recreational vehicles would gain new access to presently-remote areas. The impact of such increased access would be particularly significant during the hunting season, at which time much of the Owyhee Mountain region receives peak recreational demands. Increased access would lead to increased hunting pressure and the loss of wildlife sanctuary areas. The ultimate result would be smaller game populations and shorter hunting seasons.

Increased access along the proposed transmission line also would result in increased vandalism of historic and archeologic resources. The extent of this adverse impact cannot be readily quantified. There is an excellent discussion of this subject in the Bureau of Land Management's Draft Environmental Impact Statement for the proposed 500 KV transmission line.

Q. What is your general impression of the Environmental Assessment for the proposed 500 KV transmission project, published in May, 1975, by VTN Oregon, Inc., for the Pacific Power and Light Company?

A. The Environmental Assessment is generally deficient in its description of the environmental impacts of the proposed transmission project. It is also deficient in its description of alternatives to the proposal. The Environmental Assessment

would tend to mislead the reviewer by making the proposed route appear to be more environmentally acceptable than it would be in actuality.

The biologic and aesthetic impacts of the proposed construction and maintenance project are generally underestimated or, in some cases, overlooked entirely. On Page 4-8 of the Environmental Assessment, under Section 4.3.1, the lead sentence suggests that:

"Overall impact to the vegetation and wildlife in the study area is not expected to be significant."

Such a statement could only approach the truth if all new construction and maintenance roads could be effectively closed following installation of the proposed transmission line. However, the very nature of the country through which the line would pass makes it highly unlikely that effective closures will be achieved. This is particularly true within the Owyhee Mountains, where the remoteness and vastness of the area makes it next to impossible to adequately enforce access restrictions.

On Page 6-1 of the Environmental Assessment, under Sections 6.1 and 6.2.2, the following statements are made:

"Most unavoidable adverse impacts associated with the project are short-term. The principal long-term adverse impact is the visual impact on the aesthetic environment.

Short-term effects associated with construction of the line include disturbance of native vegetation and displacement of wildlife species."

Here again, the reviewer might be led to erroneously be-

lieve that the impacts of road construction and maintenance will be short-term, except for the visual impact on the aesthetic environment.

The only admission that I could find in the Environmental Assessment with regard to the adverse effects of increased access is on Page 4-12, under Section 4.3.2.2:

"The maintenance road may cause increased access for hunter use and the establishment of weedy plants within disturbed areas" (emphasis added).

No mention is made of the increased access which will be caused by new work roads, nor is mention made of the increased cross-country travel which may be expected once the new roads are in place.

What is lacking in the Environmental Assessment is an open and honest admission of the fact that it is going to be exceedingly difficult to effectively close any new construction and maintenance roads to motorized recreation vehicles. Also lacking is proper recognition of the fact that, in the absence of effective closures, access to presently-remote areas will increase dramatically, and will thus lead to further degradation of the wilderness character of these areas, and increased pressure on our already-hardpressed wildlife resources.

The Environmental Assessment lacks a description of the impacts of the proposed transmission project on the Toy Mountain and Boulder Creek Back Country Study Areas. Neither of these areas are properly recognized in the Environmental Assessment for their special back country values. With respect to

the Owyhee Mountains in general, the Environmental Assessment does admit on Page 4-23, under the section entitled Areas of Special Sensitivity, that:

"Several areas along the proposed right-of-way represent areas of high aesthetic value and/or possess high potential population exposure."

However, the reader is informed on Page 4-22 that the impact of the proposed project on the aesthetic environment of the Owyhee Mountains will be "low" or "medium."

What the Environmental Assessment needs in this regard is an open and honest admission of the fact that the wilderness character of the Toy Mountain and Boulder Creek Back Country Study Areas will be completely eliminated along the proposed transmission line and its accompanying roads.

Lastly, on Page 8-1 of the Environmental Assessment, the final paragraph states that:

"It is not anticipated that the proposed project will foreclose present or future land use or management options in the study area. Existing land uses will be largely retained and unaffected. No conflicts are anticipated with Federal, State, or local planning and development."

Statements such as these typify the basic inadequacies of Pacific Power and Light Company's Environmental Assessment for the proposed 500 KV transmission project. The proposed project will, in fact, foreclose the option to maintain the wilderness character of the Toy Mountain and Boulder Creek Back Country Study Areas. The proposed project will foreclose

the option to maintain current wildlife populations and quality hunting in the Owyhee Mountains. The proposed project does conflict with present Federal planning and development programs.

The Environmental Assessment is not so much a tool for selecting the most environmentally-acceptable route as it is a project justification statement. It therefore deserves only cautious and critical reading.

Q. Have you considered any alternatives to the proposed 500 KV transmission project?

A. Yes. I have reviewed the alternate route discussion in the Bureau of Land Management's Draft Environmental Impact Statement for the proposed transmission line. However, I have not had an opportunity to examine these alternate routes on-the-ground.

Q. Based on the information available to you, do you consider any of these alternate routes to be more acceptable than the applicant's proposal?

A. Yes. Both of the northern alternatives in Idaho, designated as Alternative Routes I and II, and delineated on Map A-3 in the Appendix of the Bureau of Land Management's Draft Environmental Impact Statement, are preferable to the applicant's proposal. Of these two northern alternatives, the most northerly would have the least impact on wilderness, scenic, and recreation resources. This route is designated as Alternative Route I on Map A-3.

Q. What is The Wilderness Society's position with respect to the designation of regional or cross-country utility corridors?

A. The Wilderness Society strongly favors the designation of reg-

ional or cross-country utility corridors. Such corridors are absolutely essential in order to eliminate further utility sprawl and environmental degradation.

Utility corridors which cross public lands should be retained in public ownership in order to eliminate unnecessary encumbrances on lands which might otherwise go into private ownership.

The location of such corridors must be carefully selected to assure that important public resources and values are not compromised by utility development, and to assure that facilities within the corridors can be easily monitored and maintained. Where possible, regional or cross-country utility corridors should be established along existing utility rights-of-way.

Q. Based upon the information available to you, do you have a formal recommendation in this matter?

A. Yes. The Wilderness Society strongly recommends that the Pacific Power and Light Company not be granted a Certificate of Public Convenience and Necessity along the proposed route.

The Wilderness Society recommends that, in the event that the Idaho Public Utilities Commission determines that there is a legitimate need for a new 500 KV transmission line across southwestern Idaho, any such line should be constructed along or near the route designated as Alternative Route I on Map A-3 in the Appendix to the Bureau of Land Management's Draft Environmental Impact Statement for the proposed 500 KV transmission project. The Wilderness Society recommends that this be done in order to avoid unnecessary degradation of wilderness, scenic, and recreation resources located on public lands in Idaho.

Finally, The Wilderness Society recommends that the Idaho Public Utilities Commission adopt a formal policy of limiting all new regional or cross-country utility development to designated corridors, in order to avoid further sprawl of transmission lines and pipelines, and in order to better coordinate utility development with Federal, State, and local land use planning efforts.

IN REPLY REFER TO:
6221 (930)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Idaho State Office
Room 398, Federal Building
550 W. Fort Street
P. O. Box 042
Boise, Idaho 83724

Bureau of Land Management
Boise District

November 15, 1973

Instruction Memo No. ISO 73-278
Expires: 12/31/73

To : All District Managers

From : State Director

Subject: Back Country Management Guidelines

All the districts have identified areas in the planning system that have primitive quality but don't quite meet the standards for inclusion in the wilderness/primitive system. These areas deserve special attention to protect the primitive values. The Forest Service and the BLM have accepted the designation of "Back Country" to describe an area that is to be managed differently than a wilderness/primitive area and the average national forest or national resource land.

Attached for your review is a proposal for back country management. These guidelines should be reviewed for adequacy by using an area in your district as an example to see how they fit.

Back country will be managed so as to appeal to the following classes of recreationists:

1. The hiker, horseman, or motorized recreation vehicle (MRV) operator who participates in his activity for the enjoyment of that activity alone, and is not overly concerned by the surroundings trails are located in.

2. The hiker, horseman, or MRV operator who uses each form of transportation to aid him in participating in another activity but because of limited time he appreciates higher quality trails for speedier access.

3. The MRV operator who likes the challenge of trail riding as apposed to operating off a road or trail or on a highway.

4. The individual who does not have the skills to handle himself in a truly wilderness situation and needs a training ground for developing these skills.

5. The individual who doesn't have the skills for the wilderness situation and is not interested in developing them but appreciates the opportunity for a semi-wilderness experience over the regimented recreation site conditions.

Back country management will be much more difficult to attain in the type of country BLM typically administers. In the higher elevation timbered areas normally found in the national forests, people and noise are easier to screen from other users by using vegetation and topography. The development of a sense of isolation for the visitor is more difficult because of wide open vistas and the lack of heavy vegetation. However, the back country user will tolerate contact with other users more than the pure wilderness type. The existing low vegetation and physical relief should be fully utilized in locating trails and other use facilities. If done carefully, the visitor can feel just as lost one mile from a road in the desert as he might feel in the forest.

No single recreation user group should be given dominant consideration in back country management. The primary considerations will be the resource first and secondly to provide the maximum opportunities in numbers of users and type of activities available. We shouldn't be arbitrary in our decision if motorized use conflicts with non-motorized use and automatically let the latter use win out.

When you stop to consider this type of conflict, by sheer numbers of participants, the MRV operators should be given the choice. Especially if both uses have acceptable impact and only conflict with each other. The concept of hiking and horseback riding being pure and MRV use being tainted is not considered a valid reason for giving the non motorized use preference. Many MRV users are conservation minded--many are not. Many hikers and horsemen are conservation minded--many are not. It is inaccurate to say it is all one way and not the other. It has been demonstrated that MRV's operating on trails with adequate mufflers have very little impact on the resource or other users. It is the responsibility of the management agency to enforce noise controls, just as much as it is the user's responsibility to comply with restrictions.

In developing management plans consider potential winter use. With an adequate, average year snowpack the areas might be useable by snowmobilers or cross country skiers. If areas appear to offer this potential, all developments should be designed accordingly. Signs should be placed higher and shelters or toilets placed on raised platforms to be accessible with the snowpack.

In the future, we will be dealing with primitive quality areas of three types:

1. Primitive Area - The area with all the qualities outlined in the Wilderness Act. The two criteria controlling the timing for "Primitive Area" designation are in WO Instruction Memo 73-399. The area has to be fully tested through the Bureau planning system and there must be adequate assurance that management can be initiated upon designation. Area should be managed using primitive area criteria immediately to protect the values.

2. Potential Primitive Area - Areas that have all the qualities of a wilderness except certain man made features must be removed and the sites rehabilitated to restore the natural condition. Management should be initiated immediately to protect primitive values until formal designation can be made.

3. Back Country - Areas that have some qualities of wilderness but are not unique or outstanding enough to be classed with other wilderness areas in the system or BLM primitive areas. Manage according to criteria established for "back country." No formal designations should be made until the same criteria has been met as required for primitive designations. The area should be tested through the planning system and there must be assurance management can be initiated upon designation.

Please review these draft guidelines and be prepared to discuss them at the District Manager's Meeting on December 5.

Attachment
Proposed Management Guidelines

Proposed Management Guidelines
Back Country Areas
Idaho

Objectives of a Back Country Designation

The primary objective is to provide the recreation visitor, regardless of his mode of transportation an opportunity for a recreation experience in a natural area having the minimum of man made intrusions. A primitive experience can be offered even though the area is not unique or outstanding enough to be part of the wilderness/primitive system.

Management Objectives

Back country areas should be managed to accommodate the maximum number of users and offer the greatest possible variety of opportunities while maintaining a near primitive environment. In order to accomplish this the users need to be dispersed throughout the entire area. To do this, trails and developed facilities need to be placed according to a plan. In addition to the actual trails other techniques can be applied such as use zoning, power restrictions, law enforcement, trail restrictions, etc. The quality of access will be higher than that in a primitive area, to provide easier and speedier access for more complete utilization and dispersal by the recreation user.

A back country area could be an area that is generally low quality but contains numerous high quality scenic or special feature islands needing protection.

Physical Characteristics of Back Country

Back country should be a cut above average national resource lands in that there should be certain special natural features worthy of protection.

Back country may include a broad spectrum of ecosystems just as in a wilderness or primitive area. There could be mountains, foothills, deserts, valleys, or any combination of types. The difference between back country will be the presence of cultural features, land patterns that are not unique to the region, or the lack of special outstanding features. Areas that have all the qualities except are disturbed by man made features capable of being restored should be managed as primitive until the restoration is complete and formal designation can be made.

Location

Although back country can provide a buffer between BLM primitive or a wilderness area it is not mandatory. Back country may best serve the public by being easily accessible from major roads or close to communities. If the back country area itself is fairly isolated, the major access to the area should be considered for up-grading. The objective of back country will be defeated if it is difficult to reach because of low class, slow road travel to the point of entrance.

Size

Back country should be of sufficient size to offer opportunities for isolation. Because of the ability of the motorized recreationists to cover more ground than those afoot or horseback, some may use the area for day use while others want to camp. There is no arbitrary acreage figure that can apply. The type of uses to be allowed, vegetation, topography, etc. will provide the best indication of how large the area should be.

Improvements

Existing fences might need to be modified and new fences constructed if they detract from the natural quality of the area. They should be as

unobtrusive as possible but not present an obstacle to travel.

Water developments, stock ponds, or stock water tanks should be designed to blend with the surroundings. Recreational water (culinary) should be provided as part of all stock water developments.

No new improvements will be installed which require the operation of heavy equipment.

Any right-of-way corridors, pipe lines, canals, etc. should be routed around the area if possible. Communications sites would be in conflict with back country management.

Trails

Generally, all trails should be multi-purpose for use by all forms of transportation. Hiking trails will be designed to be less rigerous and challenging than those in a wilderness/primitive area. The tread will be wider and maximum grades generally less than 10 percent. There may be other single purpose trails for a specific mode of transportation not only hiking, i.e. specific horse back or MRV trails for various classes of vehicle. Don't over develop MRV trails. They should be as challenging as the terrain will allow without creating an erosion hazard. MRV trail riders don't want super highways since a big part of trail riding experience is to overcome challenges the trail provides. The only way to develop completely proficient riders is to provide adequate challenge. Signing on any multi-use trail or single use MRV trail needs to be more obvious than on a hiking trail because of the rapid speeds with MRV's.

Development Levels

The cost to develop and maintain recreation facilities will be higher

than similar costs in a primitive area. In addition to providing more facilities to help spread the use and accommodate more people, the quality will be better to provide easier access and give the user a more comfortable situation.

Trail head facilities, picnic sites, campgrounds, and rest areas will be provided to protect the resource, the health, and the safety of the visitor and to disperse use. Sanitary facilities and litter disposal should be provided at all sites where use will be concentrated. The best toilet type will be a chemical unit that doesn't require pumping. Where possible water should be developed and in some areas this may be a critical factor to disperse and encourage use during normally undesirable use periods.

Fireplaces should be installed to reduce fire hazard. Tables should be moveable so the user can establish his own pattern depending on the use at the site any particular time. Cabins or shelters might be necessary where weather extremes may otherwise make the area unuseable. Table shelters might encourage use in desert areas by providing shade during summer months.

Roads

Existing roads should be closed or converted to trails for horses, hiking, or MRV's including 4-wheel drive if they fit into the overall trail system. New roads for timber harvest or mining should be designed to fit as components of the trail system upon abandonment. Roads can be rehabilitated but still serve as trails for trail machines, hiking, or horses.

Other Resource Uses

Domestic Livestock

The presence of livestock will not conflict with back country management except in facility development sites, picnic grounds, camp areas or rest areas. Such sites may have to be fenced to exclude livestock but this will have a minor affect on available forage. In some areas, cattle or sheep grazing and the activities associated with livestock operations will contribute to visitor enjoyment.

Timber Harvesting

Timber harvesting is acceptable in a back country area. The method of harvest and silvicultural practices should be considered in relation to recreation use and primitive type management. Cutting practices should be designed to buffer trail routes and facility development sites. All roads main haul and work roads will be low class temporary types. In laying out the road system consider the use of abandoned roads as part of the trail system.

An operating timber sale can be used as a point of interest for visitors, and opportunities for informational signing should be identified.

Mining

The area should be left open to mining except for the actual recreation facility development sites. Potential trail heads, picnic sites, and campgrounds should be withdrawn from mineral entry. Also, any special physical feature subject to damage should be withdrawn.

The presence of old mining activity as it relates to the cultural history of the area should be treated as a recreation attraction and

interpretation provided. Apparent hazards should be treated to eliminate unsafe conditions but not necessarily removed since they might represent a point of public interest.

Solicit the cooperation of the mining industry in mining exploration and road location so improvements will not unnecessarily damage the area. Roads should be made part of the trail system.

Resource Protection

Fire Prevention and Suppression

Zones should be established to indicate where fire suppression should or should not be allowed.

Where possible fire breaks should be constructed around the area to keep fires from entering or to contain fire within the area.

Heavy equipment should be used only as a last resort. Rehabilitation of fire lines will be done immediately after control has been attained.

Insects and Disease

Any control instituted would be that which would be the most direct for the target insect or disease, and which would have a minimal effect upon primitive values and other components of the ecosystem.

October 7, 1976
Rt. 6, Box 891
Lakeview, Oregon 97630

State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

18

Dear Sir:

I would like to express my opposition to Pacific Power and Light's proposed 500KV power line for the following reasons:

1) I question the need for the additional power in the southern Oregon area. Growth and concurrent increased power demands have not lived up to projections. If power needs do increase alternative forms of power should be investigated; solar, wind, use of ocean currents.

2) The statement of "excess power" in the Wyoming plants is an absurdity. The only time you have excess power is when water has to go over the dam anyway. Burning coal, that is a non-renewable resource, cannot be considered "excess power".

3) The BLM Draft Environmental Impact Statement does not take in to account the growth and consequent increased power usage that would result from the presence of the power line. People need to be made aware that energy is [redacted] limited commodity, and they need to be taught to conserve their energy usage. Putting in a power line would give the impression of an unlimited supply, hence the public would continue on unlimited usage. PPl could better spend their money and serve the American public by researching ways to conserve energy and teaching people to conserve. BLM, as a servant of the American public, also has an obligation to conserve energy. Allowing a power line to be put across public land, when there is a great question of its need, is not serving the best interest of Americans or future generations.

4) Building of the line would open up previously undisturbed areas to easy access by the public. More roads and easy access are one thing that our public lands do not need. We must maintain some areas that are not disturbed by human technological developments.

5) The areas of Klamath Marsh and Warner Valley must be avoided by any development, including power lines. These areas provide critical waterfowl habitat. Habitat that each year is decreased. The Warner Lakes area has one of the largest nesting colonies of white pelicans in Eastern Oregon. Let's not knowingly decrease our waterfowl.

6) As a property owner in the Goose Lake Valley I do not wish to look at a huge power line from my kitchen window. Goose Lake Valley is a very open area and activities and structures are very visible.

Sincerely,

Christine Hill

Christine Hill

ROBERT W. STRAUB
GOVERNOR

Executive Department
INTERGOVERNMENTAL RELATIONS DIVISION
240 COTTAGE STREET S.E., SALEM, OREGON 97310

19

October 7, 1976

Mr. Storms
State Director
Bureau of Land Management
729 N.E. Oregon St.
Portland, Oregon 97232

Dear Mr. Storms:

Re: PP&L 500 kv Transmission
Line from Midpoint, Idaho
to Medford, Oregon
PNRS 7608 4 1230

Thank you for submitting your draft Environmental Impact Statement for State of Oregon review and comment.

Your draft was referred to the appropriate state agencies. The Public Utility Commissioner, the Department of Energy, the Aeronautics Division, the Division of State Lands, the Department of Geology, the Department of Agriculture, and the Department of Forestry offered the enclosed comments which should be addressed in the preparation of your final Environmental Impact Statement.

We will expect to receive copies of the final statement as required by Council of Environmental Quality Guidelines.

Sincerely,

William H. Young

William H. Young
Administrator

WHY:lg

Enclosures

LOCAL GOVERNMENT
RELATIONS DIV
SEP 10 1976

PUBLIC UTILITY COMMISSIONER OF OREGON

LABOR & INDUSTRIES BUILDING • SALEM, 97310 • Telephone (503) 378-6355

ROBERT W. STRAUB
GOVERNOR

CHARLES DAVIS
Commissioner

August 30, 1976

REQUEST FOR PROPOSALS TO STUDY EFFECTS AND MITIGATIONS OF HIGH VOLTAGE POWER LINE ON WATERFOWL AND HABITAT

The Public Utility Commissioner of Oregon invites proposals from independent expert individuals and groups. From among them he will appoint a panel to investigate and to advise him this winter as to probable effects and appropriate mitigations in building a 500,000 volt power transmission line across or near significant winter concentrations of waterfowl on the Pacific flyway in Klamath and Lake Counties in south-central Oregon.

The two potential concerns are:

1. collisions of birds with the line or towers, both game and non-game birds;

2. influence the line would have on waterfowl use patterns in the area.

If either concern appears significant, the panel will advise the Commissioner on local route changes and other reasonable measures to reduce the likely problems.

The principle area concerned is:

the Klamath Basin, Klamath County, Oregon, north of the lower Klamath National Wildlike Refuge (Tulelake, CA).

The line will also cross (or skirt) one or more of these areas, depending on actions by other agencies:

Warner Valley, between Hart and Crump Lakes, and near Plush, Lake County, southwest of the Hart Mountain National Antelope Refuge;

ORS 756.040(1) The commissioner . . . "shall represent the customers of any public utility, railroad, air carrier or motor carrier, and . . . he shall make use of the jurisdiction and power of his office to protect such customers, and the public generally, from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates."

Sycan and Sprague Rivers near Beatty, Klamath County;

between Silver and Summer Lakes, Lake County.

Please see the sketch maps (1-3) attached. The investigation will include field study, review of the record developed in public hearings, and survey of applicable literature and data.

Proposals must be received by October 4, 1976. The award will be made October 15, 1976, and the study will commence soon thereafter. Tentative conclusions should be received by January 21, 1977, and the final report by March 4. For a panel of three researchers, the investigation and report would require some 50 to 100 researcher days, including field study; clerical, local transportation, and other support services will be furnished by the Public Utility Commissioner's office. Tentative contract limit is $15,000.

Suggestions are invited as to possible participants and study design. All replies will be considered and acknowledged.

Proposals are invited from individuals and teams, and team members may also be considered as individual researchers. Proposals and participants will be evaluated as to expected contribution to resolving the questions of waterfowl effects and including but not limited to the following considerations. The panel will include at least one trained, experienced waterfowl biologist. Expertise in ecology and animal behavior is also desirable. The panel may need to work with state, federal, local, and power company officials, and to relate their recommendations as to routing to other aspects and considerations. The panel will use an autecological approach, focusing on a subset of each system affected but not ignoring the entire system, nor ignoring other land uses, values, costs, and technical feasibility. To assure independence, every researcher must disclaim any personal interest in the study results and route selected.

Address replies and information requests to:

Public Utility Commissioner of Oregon
Attention: Howard Teasley, Project Manager
Labor and Industries Building
Salem, Oregon 97310 (1-503-378-6355)

STUDY BACKGROUND

Pacific Power & Light Company proposed in the spring of 1975 to construct the 500,000 volt transmission line from Midpoint (near Twin Falls), Idaho, to Malin and Medford, Oregon, along the

route selected by its consultant, VTN-Oregon. (Cause No. UF-3182) The public Utility Commissioner was designated the lead agency to develop the state response and to balance interests and considerations, though Oregon has no State Environmental Policy Act as such.

Pacific applied to the Commissioner in June, 1975 and a formal investigation was undertaken. Public hearings were held in Salem, Medford, Klamath Falls, and Lakeview, Oregon, in December, 1975.

It appeared during the December hearings that while most foreseeable impacts could be satisfactorily mitigated, significant waterfowl interference might well remain. As stated above, the particular question is whether the line would cause significant loss of individuals or by behavioral inconsistency lead to loss of habitat or change in species composition and if either, what route changes and other feasible measures would reduce the likely impacts. The subsequent hearing in March did not resolve the issues to the Commissioner's satisfaction.

The line (and alternates) as proposed by the applicant and the BLM would cross the Klamath Basin where the Pacific flyway is constricted to a span of some 7 miles. It is estimated that 80% of the migrating waterfowl of the Pacific flyway use the basin at the peak of the fall migration. The five million birds include 4.5 million ducks, 250,000 geese, 360,000 coots, 6,000 swans, 4,000 grebes, 4,000 terns, 1,000 white pelicans, and 800 cormorants - said to be the highest concentration in North America. It was alleged, but neither proved nor disproved in the record, that the proposed east-west line in a north-south feeding and nuptial flyway would threaten collisions and other interference, with consequent avian mortality and effective habitat loss.

Additional local route alternatives and other measures were suggested during the hearings. Lesser but still significant potential impacts could arise in the other areas mentioned above.

The interim order awarded the line the requisite Certificate of Public Convenience and Necessity and attached mitigating conditions, but left open the questions of the route through critical waterfowl areas:

> "12. In response to the limited issues of [waterfowl] the Commissioner will appoint a panel... to advise the Commissioner as to whether the proposed transmission line will pose a significant substantial impact upon waterfowl. The Commissioner accordingly will defer determination as to whether the public convenience and necessity [are] best served by this specific route proposed by PP&L until such time as the Commissioner has had the benefit of such advice.

"14. The Commissioner has considered all other issues raised by interested persons making limited appearances, and finds that all such issues either (i) have no merit; (ii) are not of such significant concern or impact as to outweigh the need for the proposed line or criteria by which the prime route has been selected, in view of the mitigations as stipulated in Appendix A and finding of fact 12; or (iii) PP&L has resolved such issues by appropriate action or by clarifying the subject matter thereof. The specific route evenutally approved will have been chosen to balance economic, engineering, and aesthetic considerations so as to minimize any adverse impact."

Construction would also require approval by the Public Utility Commission of Idaho and by the U.S. Bureau of Land Management (BLM) State Directors in Oregon and Idaho. The BLM draft Environmental Impact Statement (DEIS) is now available. The BLM and Idaho Commission hearings are set for late September and early October. The BLM DEIS considers alternate routes as well as that the company proposed, but none of the alternates seems likely to avoid the potential Klamath Basin problems. Klamath County and perhaps other local governments would have to approve conditional use permits as well.

PHYSICAL CHARACTERISTICS

The line would consist of three 3-wire bundles, or nine conductors, each at least 1.316" in diameter. Bundles would hang 30 to 35 feet apart suspended from towers averaging 140 feet in overall height. Two 3/8" galvanized steel cables would be strung along above the line, supported at the peaks of each tower, for lightning protection. The conductors would droop from 120 feet to a 38 to 55 foot minimum ground clearance. The towers would be free-standing, four-legged galvanized steel structures placed an average of 1,250 feet apart. Towers would be some 80 to 90 feet wide at the top and 22 to 33 feet at the base.

The climatic conditions along the proposed route are characterized by wide range in temperature, considerable variability in precipitation, differences in snow depth at higher elevation, and winter storms throughout the region. About 55% of annual precipitation occurs during the months of November through March. Annual precipitation would range from around 9 to 22 inches over these segments. Ground fogs and winds occur fairly frequently during fall and winter months. (These may complicate the study, and are said to cause birds to fly at transmission-line heights during late twilight and early dawn flights.)

HAT:lab

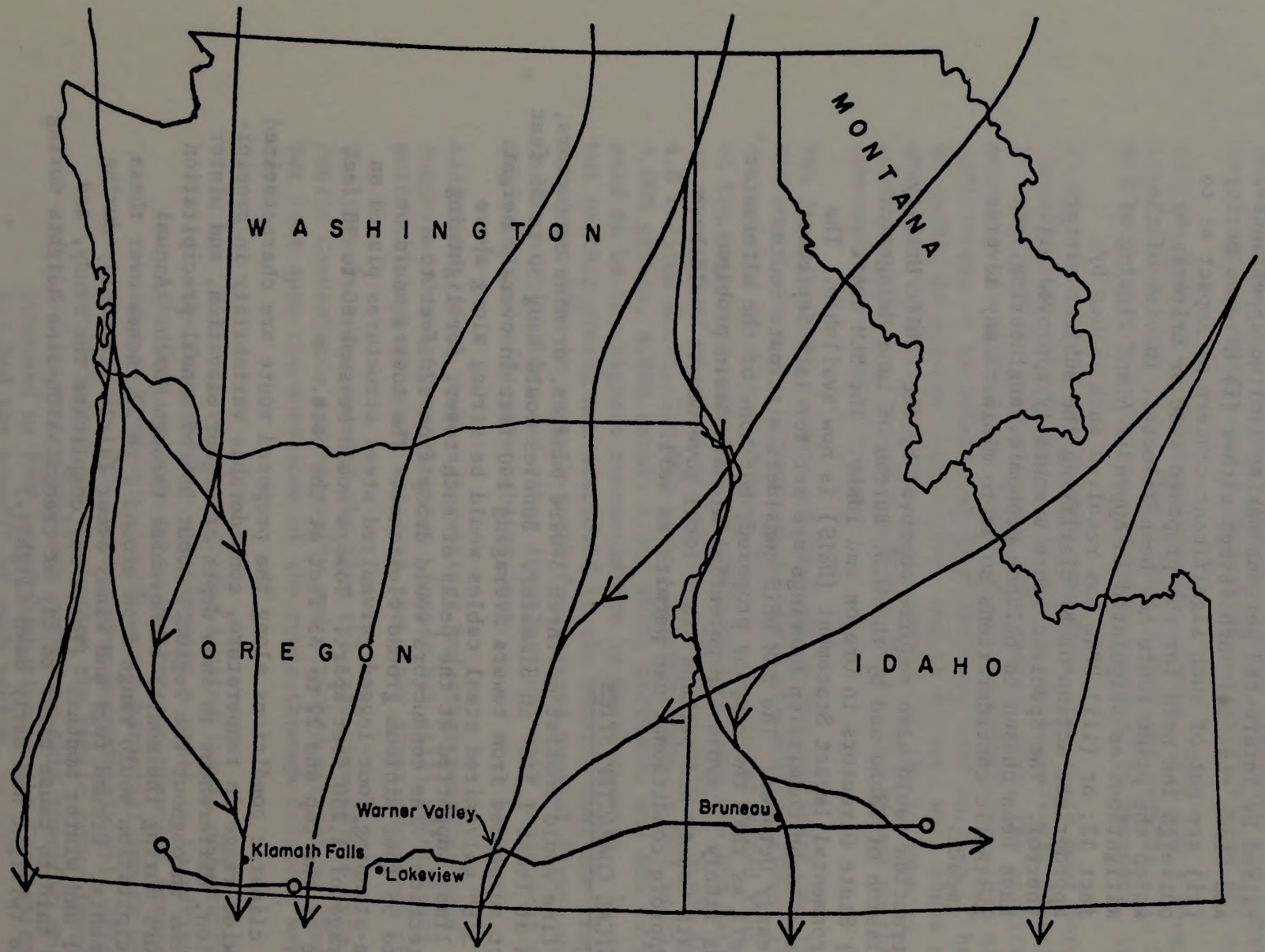
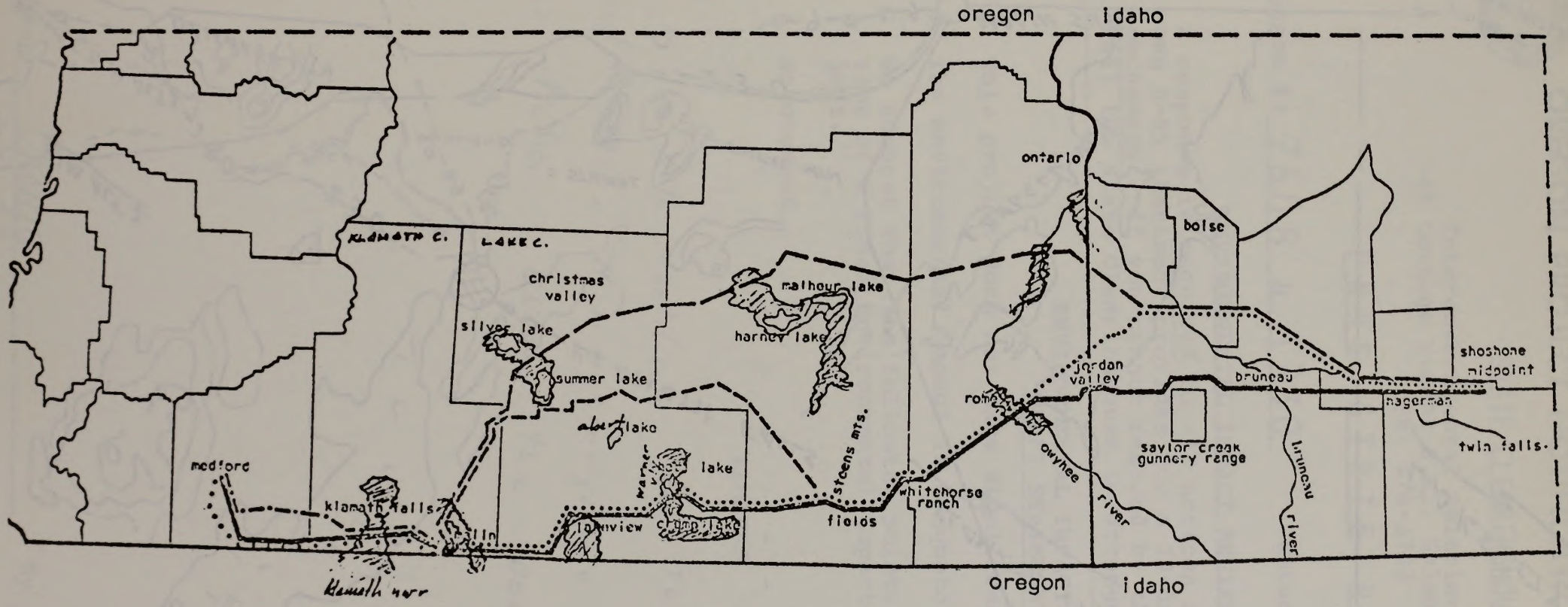


FIGURE II-9 WATERFOWL MIGRATION ROUTES →
(Flyway data from Oregon Dept. of Fisheries & Wildlife, 1975, and "Waterfowl Tomorrow," USDI, 1965)

ATTACHMENT 2



PROPOSED 500 K V LINE ———————

WATERFOWL CONCENTRATIONS

MALIN TO MEDFORD:

alternate route 1 . . . . . .

alternate route 2 —.—.—.—.

MIDPOINT TO MALIN:

alternate route 1 — — — —

alternate route 2 .....

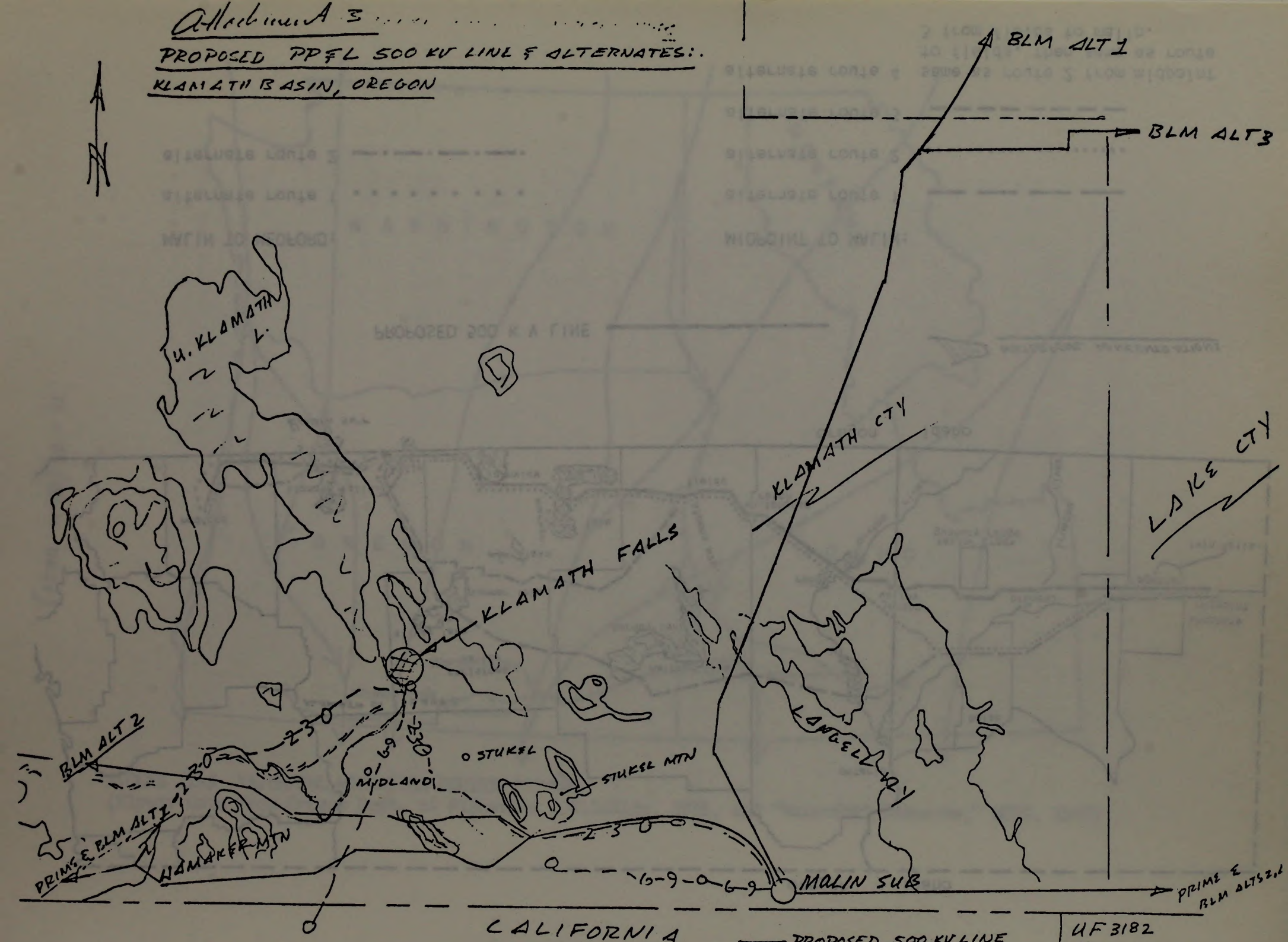
alternate route 3 — — — — —

alternate route 4 same as route 2 from midpoint to fields, then same as route 3 from fields to malin.

Attachment A 3

PROPOSED PP&L 500 KV LINE & ALTERNATES:

KLAMATH BASIN, OREGON



UF 3182

HO 1 MAR 76

1:500 000

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

( ) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

REMARKS

The site certificate for this transmission line was grand fathered. As a consequence, we do not have jurisdiction over this particular project.

David Philbrick

RECEIVED
SEP 2 1 1976
DEPT. OF ENERGY

Agency Energy By _____

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

LOCAL GOVERNMENT RELATIONS DIV.
SEP 16 1976

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

(X) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

A review by the Aeronautics Division of the proposed routes for the Pacific Power and Light Company's proposed 500KV line through Oregon has been completed. The following comments are submitted:

1. There appears to be no adverse impact upon those airports adjacent to or in relatively close proximity to the applicant's proposed primary route.

2. That portion of the applicant's proposed alternative route #1 that borders the Ashland Airport may present a hazard to landing aircraft if the towers are appreciably higher than those presently installed along the present right-of-way. Appropriate warning lights should be installed if the latter situation will exist.

Agency AERONAUTICS DIVISION By Ray Costello

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

INTERGOVERNMENTAL RELATIONS DIVISION
SEP 15 1976
RECEIVED
SEP 17 1976
DIVISION OF STATE LANDS

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

(xxx) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

REMARKS

See attached comment..

Agency Lands By Leonard L. Hickerson

Sept. 13, 1976

500 KV Power Line (7608-4-1230)

The draft Environmental Impact Statement is seriously deficient in three principal areas: a) the matter of management framework plans. b) the economic analysis and load projections. c) the assumptions which underly some of the conclusions.

Detailed comments are as follows:

1. On page 134, the inconsistency with management framework plans, both in Idaho and in Oregon BLM Districts is not dealt with. These planning efforts, coordinated on the local levels are an important factor in management of millions of acres of national resource land. Decision making in the state office of BLM, and in fact at national levels, should reflect these local planning decisions.

2. Pacific's statement that demand will increase by 4.8% assumes an in-elastic demand curve in the face of price increases. This is left unexamined by the draft EIS.

3. Statements to the effect that remaining power surpluses would be transmitted from the Malin substation over existing lines either north to the Pacific Northwest, or south to California, depending on the time of year are left unexplained. The analysis needs to specify the amounts predicted to be surplus and where their probable transmission will route them.

4. The Market Area Analysis beginning on page 2-230 states that growth rates of 2.5% annually are likely in the estimation of the analyst. This assumption of more expertise than professional forecasters is without merit. An unbiased EIS will in fact accept the 1% projections made and used in economic and land use planning decisions throughout the state and the Pacific Northwest.

5. Statements by the analyst that industry will decline if the 500 KV line is not constructed are also without merit. Note that less than 1% of all electric power users of Pacific are industrial users. That is a systemwide statistic. Only 385 out of 133,293 or .3% are industrial users in the southwest division of PP&L; and only 105 of these are in the Jackson County area, which is the terminus of this powerline. If the major industry, lumber and wood products, employs only 5,060 persons out of 34,780 employed in the regional labor force and government employs 6,120 persons, why will the quality of life be significantly affected by a slowed up growth curve for industry. Market for wood products will dictate the growth curve far more than power availability.

6. On page 2-241, the number of new customers in the southwest division needs to be quantified. Vague statements and misleading percentages do not aid the analysis.

7. On page 243, the accuracy of the west group forecast is accepted without comparision to its actual forecasting performance.

8. It would be advantageous to know at this point in time which capacities are now being exceeded or predicted to be exceeded on a line by line basis as obviously future expansions of these lines will take place and that expansion effort could be tied to the transmission of future power loads.

9. Recognizing that many readers will already know the obvious fact that rate payers in the entire Pacific system will pay for any over building of power lines in connection with the Jim Bridger plant, it is important to determine that the maximum benefits to the majority of users are obtained from the power capability obtained by this line and, in fact, by the Jim Bridger power plant.

10. On page 3-129 it is an important assumption of the analyst that provision of electric power has no adverse impact. There are many conflicting points of view concerning this statement.

11. On page 4-14 the unresolved legal questions are neither explained nor possible resoultions suggested. If an EIS is prepared to guide decision makers at higher levels it appears that such information should be provided.

12. On page 6-3 the statement that future expansion of the powerline corridor is possible is too briefly covered to guide a decision maker in this matter.

13. The treatment of the growth responsive or growth inducing issue on page 6-7 is inadequate.

14. On page 8-218 the no-action alternative does not consider the possibility of a re-routed transmission line to follow existing utility corridors through Baker, Union and Umatilla Counties. Neither does it consider re-routing the line through California since, in point of fact, California areas will be served by this line. While these alternatives are at the election of Pacific Power and Light, it is an elective option of the Bureau of Land Management to select the no-action alternative and then allow PP&L management to select another corridor route which will properly relate to its load centers.

The BLM decision maker, who will be quided by the final draft of this EIS, needs to know and take full responsibility in his decision making for the following:

a) Rate payers of PP&L will pay for excess capacity.

b) The environment along 483 miles of corridor will pay for any excess capacity.

c) The initiation of this line at this time establishes, in effect, a corridor for which future expansion may be unavoidable whether or not future environmental impacts are or are not acceptable.

d) The economic assumptions made by the EIS writers are both faulty and undocumented, that is they are not stated as assumptions. This is a particularly serious objection when valid data is available which could be utilized and is being utilized in other planning efforts.

LGW/vw

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

SEP 2 1976

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

( ) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

REMARKS

The draft EIS on the proposed PP&L 500 KV power line has a very brief discussion on the geology and mineral resources of the proposed right-of-way.

To do an adequate job of determining the possible geologic hazards and mineral occurrences that might be affected by construction of this power line would take at least two man-months. Our Department does not have funds authorized to conduct such a survey and therefore we are in no position to either approve or disapprove the proposed right-of-way.

Agency Geology By R. E. Corcoran

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

LOCAL GOVERNMENT RELATIONS DIV
AUG 31 1976
AUG 27 19:5
Agricultural Development Div.

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

( ) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - -

August 31, 1976

REMARKS

It appears the Draft Environmental Impact Statement for the proposed 500 KV Powerline Midpoint Idaho--Medford, Oregon has been prepared in a manner capable of meeting many of the environmentalist's concern relative to such a huge project.

Our interest in this proposed project is based on the impact affecting agricultural lands coming within the power line corridor.

We supported the proposed project and believe the 500 KV power line should be built to serve the needs of Southwestern Oregon. However, we did recommend that wherever practical the powerline right of way follow well defined or section lines through cultivated or irrigated agriculture land so that farmers' fields would not be rendered unfeasible for certain farm operations.

Agency Agriculture By Don McKennon

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

LOCAL GOVERNMENT RELATIONS DIV.
OCT 7 1976

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

(X) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

REMARKS

The direct impacts will apparently be nominal, however the following probable results should be noted:

1. Light a flashy fuels will be created in the construction of the powerline rights of way.

2. Fire risks will be produced by sheer number of people and equipment in construction areas.

3. If fires are started by construction, most would be in areas of poor accessibility for fire fighting. However, after construction, the roads will be beneficial to fire suppression.

4. Historically, powerlines have created ignition sources which have resulted in some large and costly fires.

Agency Forestry By Phil Brogan

20

34147 Meyer Road
Cottage Grove, OR 97424
30 September 1976

Merl Storms, State Director
Bureau of Land Managmement
PO Box 2965
Portland, OR 97208

Dear Mr. Storms:

I would like this letter to be included in the official hearing record for the Draft Environmental Impact Statement, Pacific Power and Light Company Proposed 500 KV Powerline, Midpoint, Idaho--Medford, Oregon.

Firstly, I believe that the Draft EIS does not fulfill the requirements of Section 102 (2)(c) of the National Environmental Policy Act of 1970. My comments will deal generally with the entire line, and specifically with its impact on Lake County.

1) The biggest shortcoming of the DEIS is the almost entire lack of discussion of impacts on the Rogue Valley and its citizens. What will be the effect of all that power on the Medford area, an area which is near or at optimum carrying capacity? Will there be an increase in airpollution, water pollution, noise pollution?

2) There are vague references to the fact that Medford couldn't use all that power right away and it might be sent to California and the Northwest. What exactly does this mean? How much to California and how much to the Northwest. By California do you mean PPL Service Area in Northern California or will it be sent to Southern California? If this power is so important for Medford, I suggest that PPL build the line right under or over the dual 500 KV AC lines at Malin and go directly to Medford.

3) The DEIS does not adaquately discuss the need question. Just because the Oregon Public Utilities Commissioner has granted a partial certificate of need does not excuse the BLM from the requirements of NEPA to address all issues of the line. In the Final EIS the need question should be fully documented using sources other than just the Pacific Power and Light Company.

4) The FEIS should include a summary of where the power is coming from and the major impacts of electrical generation by coal and of Jim Bridger in particular.

5) The Economic incentives section (page VIII-233) should include a discussion of peak pricing, similar to what the telephone companies are using.

6) The no action alternative should include an analysis of such a decision on the profits of the Pacific Power and Light Company.

7) After a route is chosen (assuming the need question is fully answered) and before a permit is issued, a supplemental EIS should be prepared on the specific route chosen. This DEIS is not site specific and is full of assurances that impacts will be mitigated once construction begins. To cite one example, the DEIS says (page II-58-9) several endangered and threatened plants potentially exist along the PPL proposed route. Before any permit is granted for any route, a field study should determine exactly where these plants are and take all necessary steps to insure that these plants are not harmed by construction, tower placement, road construction or operation of the line. This study should be included in the supplemental EIS. The supplemental EIS should detail such things as tower placement, location of new roads, operation of monitoring programs, etc.

8) The powerline, if constructed should be done without building any new road. Use of existing roads and helicopters should be mandatory. Regardless of the route chosen, the line should follow as close as practible to existing roads, including major paved highways.

9) The line should be buried across the Klamath Marsh or not be built at all. The same should apply if the line goes anywhere across the Warner Valley.

10) The second paragraph on page I-44 states that another line is planned by 1994. Who is planning to construct it and for what purpose?

I will now address the impacts of the proposed line in Lake County. It is my opinion that the route with the least impact is the northern (Alt. I) route.

The applicants proposed route is totally unacceptable. It crosses the Warner Valley, an area said by many biologists to be just as important or more important than the Malheur National Wildlife Refuge for waterfowl and other bird life. It would also cross the Fish Fin Roadless Area and open up more land to the automobile. The citizens of Lakeview would have to view the line if it is built where PPL wants to place it.

The middle route (Alt. III) would have less impact than the proposed route, but is still unacceptable as it would have to go up the face of Winter Rim, an outstanding scenic attraction. It would also be placed too clâse to Summer Lake.

The northnern route would have the least impact, but there still would be several severe impacts. The line would probably have the least impact on wildlife, but it would have to cross through Picture Rock Pass, which besides being rather scenic could contain valuable and interesting archeological sites. It would cross critical deer winter range near the pass.

In conclusion, I do not feel PPL has proved a need for the line, nor do I feel that the DEIS is adaquate. The Bureau of Land Management and the United States Forest Service should be very sure that the line is needed before they grant a permit to PPL build such a line and cause such environmental damage to the State of Oregon.

I expect to receive a copy of the Final Environmental Impact Statement when it is available. Thank you very much.

Sincerely,

Andy Kerr

22

STATE OF IDAHO

DIVISION OF BUDGET, POLICY PLANNING AND COORDINATION
BOISE, IDAHO 83720

CECIL D. ANDRUS
GOVERNOR

H. W. TURNER
ADMINISTRATOR

October 12, 1976

Bureau of Land Management
729 NE Oregon Street, P. O. Box 2965
Portland, Oregon 97208

Attention: Oregon State Director

Dear Sir:

The Idaho State Clearinghouse sent copies of the draft environmental statement concerning a proposed powerline between Midpoint, Idaho and Medford, Oregon to the following agencies for review and comment:

Department of Water Resources
Ken Stolz, Physical and Natural Resource Planner
Mike Frost, SW Idaho Regional Planning Director
Dept. of Health and Welfare, Div. of Environment
Idaho Energy Office
Dept. of Lands
Region IV Development Association, Inc.
Ida-Ore Regional Planning and Development Association

We are enclosing a copy of the comments from Ida-Ore Regional Planning and Development Association. the Department of Water Resources mailed their comments directly to your office and Region IV Development Association had no comment.

We appreciate the opportunity to review.

Sincerely,

Michelle Liebel

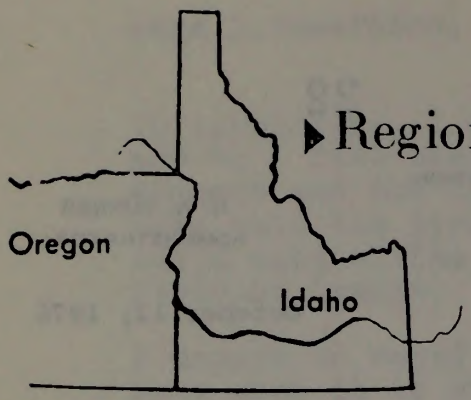
Michelle Liebel,
State Clearinghouse

lf

enclosure

cc: Ida-Ore

EQUAL OPPORTUNITY EMPLOYER



IDA-ORE
Regional Planning and Development Association

P. O. BOX 311 WEISER, IDAHO 83672
(208) 549-2411

Dr. Bart Westberg, *President*
Barton F. Bailey, *Executive Director*

MEMBER COUNTIES
Including Municipalities)

Ada
Adams
Boise
Canyon
Elmore
Gem
Owyhee
Payette
Valley
Washington
Harney
Malheur

September 7, 1976

Michelle Liebel
State Clearinghouse
Division of Budget, Policy Planning & Coordination
Statehouse
Boise, Idaho 83720

RE: SAI #00867163 - Proposed powerline between Midpoint, Ida. and Medford, Oregon

Dear Michelle:

The Association has reviewed the Draft Environmental Impact Statement prepared by PP&I regarding their 500 KV Powerline from Midpoint to Medford.

The document seems to be quite thorough, and the conclusions are based well. We were pleased to see that so many interested parties were contacted and given an opportunity to comment. Should any of the county commissioners issue negative comments, we will attempt to assist them in finding a resolution.

Sincerely,

Robert M. Taisey, Jr.
Assistant Director
Physical Planning

RMT/jr

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1500 N.E. IRVING STREET
P.O. BOX 3737
PORTLAND, OREGON 97208

35

OCT 15 1976

MEMORANDUM

To : State Director, Bureau of Land Management, Portland, Oregon

From : Regional Director, Fish and Wildlife Service, Portland, Oregon

Subject: DES-76/32 Draft Environmental Impact Statement, Pacific Power and Light Company Proposed 500 kV Powerline, Midpoint, Idaho to Medford, Oregon

We have reviewed subject environmental impact statement and offer the following:

General Comments

The draft fails to identify the concerns of various individuals and agencies, including the Fish and Wildlife Service, about transmission line caused loss of birds in major wildlife concentration areas, such as Warner Valley and Klamath Basin. Instead, emphasis is given to studies or opinions indicating that losses would be minor or insignificant. The concerns of the Fish and Wildlife Service are well documented in correspondence with your office and in testimony given at Public Utilities Commission hearings. We have also discussed our concerns with your staff at meetings. As now written, your draft erroneously implies that everyone is in agreement that there will be no problems and it therefore does not satisfy requirements for the decision-making process.

It is noted throughout the draft that statements about bird kills (losses) are downplayed by such wording as "collisions could occur." Also conspicuous is the omission of the transmission lines as a threat to flying birds--only towers and conductors are cited in this capacity. There can be no doubt that birds "will" be killed by striking the lines as well as the towers and conductors and the final statement should so state. We have addressed this further in our specific comments.

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

The draft does not clearly identify the secondary impacts the transmission line would have on environmental resources. A significant impact resulting from the cumulative effect of the proliferation of power lines has not been considered. This subject though difficult to quantify, must be addressed because of the very real impacts that result. It is our understanding that, under Oregon law, once authorized and constructed the right-of-way would provide approval for adjacent lines without a detailed review process. The final statement should fully discuss this possible legal matter which could increase environmental degradations substantially in the future without adequate safeguards.

A major deficiency in the draft is the failure to include an alternative route that would avoid the controversial area in Klamath Basin where conflicts with migratory birds will occur. Substantial concern about this area has been expressed by the Service and private individuals and conservation agencies. Until an alternative route is identified and thoroughly discussed the impact statement will not fulfill the requirements of the National Environmental Policy Act and serve as a viable tool in the decision-making process.

The Fish and Wildlife Service believes that Alternatives I, II, and III provide the means to avoid major environmental conflicts in Lake County, Oregon. Each of these alternatives would route the transmission line to the north of Warner Valley thereby avoiding concentrations of migratory birds. This problem is discussed in more detail in our specific comments.

An additional alternate route for the Idaho segment is also needed to minimize possible environmental degredation. Our suggested route is included in our specific comments.

It is noted that an alternate route through northern California has been omitted in the draft. This route was discussed several times during meetings and it offered a variety of environmental advantages. We believe that the final statement should identify this alternative and provide an appropriate analysis.

The proposed route and alternatives indicate that the transmission line would cross navigable Federal waters, such as the Snake River. Accordingly, comments on this draft statement do not in any way preclude additional and separate evaluation and comments by the Fish and Wildlife Service, pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.), if eventual project development requires a permit from the U.S. Coast Guard and/or the Corps of Engineers, U.S. Army (Sections 9 and 10 of the River and Harbor Act of 1899 and Section 404 of P.L. 92-500). In reviewing applications for such permits, the Fish and Wildlife Service may concur, with or without stipulations, or object to the proposed work, depending on project effects which may be evident at that time on fish and wildlife resources.

The draft should contain a table, chart or other suitable visual aid, to enable the reader to compare side-by-side, the impacts of all the alternatives and the proposals considered in the draft environmental impact statement.

At several places in the draft, it is stated that vegetative rehabilitation would take between 3 and 8 years to complete, except on presently barren areas, where no vegetation will be established. We believe that the 8 year maximum is too optimistic for some desert areas in Idaho and eastern Oregon. This doubt is strengthened when we note that (1) on page I-37, post-construction rehabilitation will be accomplished at the rapid rate of 2.5 miles of right-of-way per day; and (2) the Forest Service admits that revegetation success is unpredictable (see pages IV-28 and 29).

Specific Comments

Page I-44, par. 2, sentence 2: Map C in the Appendix does not show the possible second 500 kV transmission line paralleling the proposed line as stated.

Page II-58, Endangered and Threatened Flora: Information concerning the distribution of the species listed is inadequate. At minimum, the State(s) and County(ies) in which they occur should be identified. More specific locations and habitats should be included where such information is available. Neither has any attempt been made to identify the route(s) within which each species may occur. A listing by alternative routes would be helpful and far more informative than a total listing for the entire line. Also, the species list itself is incomplete and to some degree inaccurate. We have provided a more up to date list in our Appendices A and B (Oregon and Idaho, respectively). There will be some species, particularly those in the Owyhee Uplands Province, which occur in both States. These species are so designated, where information is available.

The list of plants in Appendices A and B has been compiled from the references cited in Appendix C. An asterisk indicates the species also appears in the 1975 Smithsonian Institution Report on threatened and endangered plants, prepared for the Department of the Interior as provided for by the Endangered Species Act of 1973. It is not known whether any of these species definitely occurs within the proposed or alternate routes. The species are known to occur within the physiographic provinces and counties through which the proposed and alternative lines will pass. Eight species on the draft list (page II-59) have been deleted because the best information currently available indicates that their ranges of distribution do not fall within the proposed routes. A tentative status designation (threatened, endangered, etc.) has been assigned to all species listed. However, a great deal of new information has recently been and continues to be gathered and compiled by botanists in Oregon and Idaho. Therefore, the status of many species has been or may be changed, and this information is therefore not included herein.

On the attached Appendix A is a list of plants tentatively identified as rare and endangered plants of Oregon.

For the latest information on the distribution and status of rare plants in Oregon, the following persons can be contacted: Mrs. Jean Siddall, 535 S.W. Atwater Road, Lake Oswego, Oregon 97034, (503-636-4633), or Dr. Kenton Chambers, Professor of Botany and Curator, Herbarium, Oregon State University, Corvallis, Oregon 97331, (503) 754-1106.

The plant species list for Idaho was compiled mainly from "Rare and Endangered Plants of Idaho" (reference No. 5) and personal communication with Dr. Patricia Packard. For recent information concerning the status and distribution of rare plants in southern Idaho, Dr. Packard can be contacted at the College of Idaho, Caldwell, Idaho 83605, (208) 459-5232.

Mr. Ed Schlatterer, U.S. Forest Service, Odgen Utah, (FTS-586-6441), also has considerable information on the abundance and distribution of endangered plants in southern Idaho. We strongly urge he be contacted to learn where along the proposed right-of-way those plants can be expected to occur.

In addition, two more publications concerning uncommon plants in Idaho are available and should be consulted. One of these is a list also published in Research Natural Area Needs in Idaho (reference No.7), titled A Tentative List of Uncommon Plants of Idaho. This list assigns tentative status to species in terms of being uncommon, rare, threatened, endangered, or thought to be extinct, and covers the entire state. The second reference deals with a more restricted geographical area and is titled A Directory to Disjunct and Endemic Plants of Central and Southern Idaho (reference No. 12). It is arranged by counties and cross-referenced with a species-county index. Specific locations are given when known. A status is not assigned to these species, other than all of them being either disjunct and/or endemic populations. This type of distribution is often typical of species which are now or are becoming rare.

Appendix B is a list of possible rare, endangered, and threatened species in Idaho.

Tables II-12 through II-26: These tables contain many errors and we urge you to thoroughly review their contents. To assist in this we have provided some brief notes to Mr. Bauman of your staff.

Page II-69, par. 3, sentence 1: Overgrazing by livestock has changed the vegetative composition but has not created big game range. Overgrazing has impaired the quality of the range, and livestock are competing with big game and to the detriment of big game populations. This sentence should be clarified or eliminated.

Page II-70, par. 1: The red-banded trout, a unique hybrid form, has been found in several streams of Owhyee County, such as Jacks Creek. It may occur in streams crossed by the proposed right-of-way.

Page II-72, par. 3: The discussion should clarify the fact that the California bighorn sheep is a subspecies of Ovis canadensis. The latter has not been extinct in Idaho. Further, the California bighorn has been restored also to Idaho.

Page II-82, par. 1: Mention should be made of extensive waterfowl use of seasonally flooded agricultural lands in Klamath Basin. This phenomenon produces an aquatic or marsh habitat for 1-3 months of the year, primarily winter.

Page II-91, par. 3, line 5: Delete "Prairie" and insert "Peregrine".

Page II-101, par. 3: The third sentence should indicate that sandhill cranes also nest on Lower Klamath Refuge. The word "Upper" should also be deleted from the sentence.

Page II-104, par. 3: A sentence should be added to indicate the use made of seasonally flooded grain fields by waterfowl and other water birds. Flooding acts as a tremendous attraction to birds, primarily in November through February and is a factor contributing to feeding flight patterns.

Page II-106, par. 2, line 5: Change 121,200 to 116,400.

Page II-111, Table II-30, Birds: The Prairie falcon is no longer listed by the Department of the Interior as a threatened species.

Page II-217, Vegetation, par. 1: We disagree that "no immediate or rapid chain of events can be foreseen that would induce any significant change in the vegetative resources." The imminent approval of a Bureau of Land Management Organic Act, plus the preparation of environmental inpact statements on grazing allotments in the west, will enable Bureau of Land Management to significantly reduce grazing on National Resource Lands. The result will be a steady improvement in the quality of the vegetation along the proposed right-of-way.

Page II-219, Wildlife, par. 2: Another chief contributing factor to the decline of mule deer is believed to be excessive grazing by livestock on deer summer and winter range.

Page II-220, 3rd full par., sentence 3: The draft should state whether or not the sagebrush removal programs are adversely affecting sage grouse populations.

Page III-32, sentence 2: See our comments about page II-58.

Page III-37, 3rd item under par. 1: This is an example of deemphasizing wildlife losses that would occur. The word "possible" should be deleted in the first line and "would" inserted.

Page III-37, par. 2: The first sentence relates to concerns rather than losses. Since the general thrust of the draft section is wildlife losses it would be strengthened by deleting "greatest concern" and inserting "most significant losses would occur in areas of".

Page III-40, line 2: After the word "die", add this sentence, "This is especially true for the ferruginous hawk."

Page III-41, Collision and Corona: This section fails to provide complete and unbiased information since it does not adequately describe concerns about the threat the transmission line poses to birds. It cites a power company report which states that impacts would be minor but fails to alert the reader to the fact that a major controversy exists over this subject. The final statement should include specific reference to this condition by inserting appropriate material after sentence 5, paragraph 2. Wording similar to the following is suggested: The Fish and Wildlife Service, however, does not accept this conclusion as having blanket application to all transmission lines. It has on several occasions, indicated that major losses of migratory birds would likely occur in intensive use-low flight areas such as the Klamath Basin and Warner Valley.

Page III-41, par. 1: The text should be changed to show that the transmission line would cause bird losses. This will require deletion of "could" from lines 4 and 5 and insertion of "would".

Page III-41, par. 2: The third sentence relates bird collisions to migration but fails to discuss local flights. To correct this deficiency the final statement should indicate that the greatest threat occurs when large numbers of birds concentrate in an area for resting, feeding, or nesting purposes. These birds stay for a period of time ranging from a few days to 3 or 4 months. Soon after arriving at such an area the birds develop a series of flight patterns that are not similar to migration flights. The most conspicuous action is the "feeding flight" in which large numbers of birds, especially waterfowl, move from resting areas (marshes, etc.) to feeding areas (grainfields, etc.) and back. These movements are usually most pronounced between sunset and sunrise when lighting and

visibility are poor. Another characteristic of these flights is the low elevation at which they occur especially within or adjacent to the feeding and resting sites. It is during these local flights that collisions are most likely to occur rather than during migration flights which often cover hundreds of miles nonstop at high elevations. The problem is increased by inclement weather conditions such as fog or snow storms which restrict visibility and often causes the birds to fly at lower elevations.

Page III-49, 4th full par., last 2 sentences: Fifty elk are discussed here, however, on page II-87, first full paragraph 30 animals are discussed. This inconsistency should be reconciled. In addition, we believe that these animals would be greatly affected by the increased public access afforded by the service roads associated with the proposed transmission line.

Page III-58, par. 1: The word "could" in the last line should be changed to "would" as there is no doubt that losses will occur.

Page III-58, par. 3: The last sentences indicates that "several thousand" birds could be killed during the life of the project. This means that annual losses would be very low. We do not believe that available data substantiates such a general statement especially since examples cited on pages III-41 and 42 indicate that thousands of birds have been killed in a single night. It is our recommendation that this sentence should be deleted and replaced with one more descriptive of the conflicting opinions that exist. Wording similar to the following is suggested:

> As cited above losses of migrant birds is speculative, and opinions about the probable magnitude and significance of bird kills vary greatly. Power company representatives indicate that minor losses will occur. On the other hand, the Fish and Wildlife Service has indicated that major losses would probably occur. The latter opinion has also been expressed by a private party, Mr. T. Roster, of Klamath Falls, Oregon. These opinions were presented as testimony to the Oregon Public Utilities Commission at hearings in Klamath Falls.

Page III-63, Summary: This section should be modified to indicate that migratory birds would be killed by striking the transmission line.

Page III-71, last sentence: Lower Klamath National Wildlife Refuge, 1 mile south of the proposed route, is a Registered National Historic Landmark. The line would pose a visual threat to the natural setting that remains plus endanger the migratory bird resource for which the refuge was established to protect. Reasoning behind and background of establishing Lower Klamath as a National Historic Landmark should be presented.

Page III-97, last par.: See comments pertaining to page III-71 (above).

Page III-106, Stukel to Green Springs: Construction of the line on the proposed route would undoubtedly have an adverse impact on hunters by altering the feeding pattern of birds and by resulting in a segment of area being closed to hunting as it would pose a hazard to the line/insulators to have shooting near them.

Page IV-6, item 4: The second paragraph of this item is purely conjecture and should be eliminated.

Page IV-17, Item 35, Mitigation: The measure described is to minimize losses of wildlife habitat and wildlife displacement on wetlands and at nesting and rearing sites. No consideration is given to major feeding areas such as grainfields so "feeding" should be inserted in line 5.

Page IV-24, Table 4-5, item 5: The applicant should be required to determine the amount of these losses along the applicant's power line.

Page IV-42, item 23: This is an excellent measure and should be added to the listing of Bureau of Land Management mitigative measures.

Page IV-43: The first full paragraph is a significant point and should be fully discussed in Chapter III.

Page IV-47/8, Biological Resources: Measures cited are very general and no allowances are made for mitigating losses after the project is constructed. Allowances should be made for compensation for such things as bird kills, disruption of use patterns, and destruction or alteration of habitat when such problems are identified.

Page V-6, Wildlife, item 5: This item fails to recognize the impact of migratory bird kills from striking transmission lines, conductors, and towers. The word "possible" should be deleted and the item reworded as follows: "Collisions of waterfowl and other migratory birds with transmission lines, conductors, and towers."

Page V-8, par. 2: The first sentence should have "transmission lines" inserted between "with" and "conductors".

Page V-9, item 6: Delete first word "possible".

Page V-14, Esthetics and Recreation Resources: This section should include a statement that construction would adversely impact Lower Klamath National Wildlife Refuge as a National Historic Landmark.

Page VI-3, par. 3: The last line should be changed to "would cause direct losses by collisions with transmission lines, conductors, and towers."

Page VIII-1, Alternatives to the Proposed Project: This section of the draft does not meet the requirements of the National Environmental Policy Act. The most obvious deficiency is the failure to describe an alternate route that would protect migratory bird resources in Klamath Basin. One alternative would be to go northwest from Stukel along the base of the Klamath Hills, north along Highway 97, crossing the Klamath River above Miller Island, then west to the edge of the hills and on to Green Springs. This is an approximate route. Any basin crossing north of the major waterfowl use portion of the basin and near present congestion and lines would minimize adverse impacts to migratory birds. We recognize that other conflicts would occur with this route but circumstances justify inclusion of such a route for the decision-making purposes.

Page VIII-1: The statement should also analyze one additional alternative route for the line's Idaho segment. This alternative route would pass from Midpoint, Idaho to existing Idaho substantions at Boise, Mora, and Ware; and then to Walters Ferry. West from Walters Ferry, this route would follow Alternate Route II as described in the draft environmental impact statement. The new alternative route would (1) require only one Snake River crossing, thus reducing waterfowl collision losses; (2) keep the power line away from the foraging area used by raptors which nest in the Birds of Prey Natural Area; (3) have very low impact on other wildlife species; and (4) keep the line close to existing transmission lines almost all the way to Walters Ferry.

The possibility that another 500 kV line may parallel the proposed line in the future, makes this alternative route especially appealing from an environmental standpoint.

This proposed alternative route would be somewhat longer than the applicant's proposal, as well as the segment of Alternate Route I, lying between Midpoint and Walters Ferry. However, with our alternative, little new right-of-way would have to be acquired, the Boise substation is already established, only one expensive Snake River crossing would have to be made, and many access roads already exist along our alternative route. We strongly urge Bureau of Land Management and the Pacific Power and Light Company to investigate the practicability of using our alternative route.

The alternative to upgrade the existing transmission facilities is briefly discussed on page VIII-235, however, the analysis should be expanded and the alternative given full evaluation with other alternatives.

Pages VIII-49 and 50, Alternative Route I: This alternative contains no specific reference to the existence of major waterfowl flyways and use areas in the Harney Basin. Because of proximity of this route to the major spring waterfowl use areas in the basin, possible collision and corona impacts should be mentioned. The extent of those potential impacts are unknown, but it is safe to assume that they would be significant.

Page VIII-49, Wildlife, par. 2: The presence of the power line at the Walters Ferry crossing would have more than a little effect on raptors after construction. No doubt, raptors as well as waterfowl, would collide with the power lines. Also, the access road under the power line would encourage human disturbance of nesting birds of prey near the right-of-way.

It should also be pointed out here that the proposed route crosses at least three major feeding flight paths: on Silver Creek, on the Silvies River north of Burns, and in the valley area between Burns and Buchanan.

A total of 224 recorded species of migratory birds are involved in the Harney Basin. This includes one threatened species, the peregrine falcon. It also includes a number of unique and/or status undetermined species such as the Central Valley of California greater sandhill crane flock (major nesting and staging area); the snowy plover (which nests on Harney Lake); the long-billed curlew (also a major nesting species); the glossy ibis (nesting on Malheur Lake); the golden eagle (which nests over extensive areas of the basin); etc.

Page VIII-102, Alternate Route III: No reference is made in this alternative to the existence of major waterfowl flyways between the Harney Basin and the Warner Valley. These routes, as best as

we were able to describe them, were submitted to you on a map of the area and we assumed that they were given to the environmental impact statement team for consideration. This alternative should also recognize the potential for rather significant bird kills caused by collision with the lines and towers.

Map B-2: The map does not accurately portray the extent of waterfowl habitat in the Harney Basin north of Malheur Lake. Generally, the area in the Upper Silver Creek Valley between Moon Reservoir and the north end of the valley should be included; the area along both sides of the West Fork of the Silvies River should be included down to Malheur Lake; the area along the East Fork of the Silvies north of the lake should also be included; and the area in the north part of the basin near Harney should be extended nearly to Buchanan.

Map B-3: The area shown as a Proposed Research Natural Area in the Double-O Unit of the refuge is now the Stinking Lake National Research Natural Area. It has been formally designated by the Director, although is not yet listed in the NRNA registry.

The Harney Lake National Research Natural Area has also been formally designated and should be added. This encompasses the entire lake bed.

The Malheur Environmental Field Station is incorrectly located. It should be 1 mile south of the county road leading from Highway 205 to refuge headquarters.

We believe that the Moderate Scenic Value color code should include all the Double-O Unit, since the area shown as having Low Scenic Value includes the rather scenic low rims that border the south side of the Lower Warm Springs Valley near the Double-O maintenance station.

We appreciate the opportunity to comment on this draft.

L. Kelly Gustafson

Regional Director

Appendix A. The Following Plants are Tentatively Identified in Oregon as Deserving Special Consideration in Land Management Activities, Including Selection of Research Natural Areas. Reasons for Listing Include Known or Probable Rare or Endemic Status, Disjunct Populations or Identification Nationally (in the Smithsonian Institution List) as Threatened or Endangered Species

Vascular Plants of Special Interest in the Siskiyou Mountains Province, Southwestern Oregon

Species	Distribution
Allium siskiyouense	Grassy slopes, Siskiyou Summit, Jackson County
Arabis oregona*	Rocky hillsides, southern Jackson and Josephine Counties
Calochortus greenei*	Thickets, southern Jackson County
Camassia howellii	Meadows, Josephine and Jackson Counties
Cirsium ciliolatum*	Dry hillsides near Ashland, Jackson County
Cordylanthus viscidus	On serpentine, Josephine and Jackson Counties
Cupressus bakeri	Open woods, northern Jackson and southern Josephine Counties
Cypripedium fasciculatum	Coniferous forests, Josephine and Jackson Counties
Erythronium howellii*	Open woods along Illinois River, southern Josephine County
Fritillaria gentneri	Oak woodlands in foothills, Jackson and Josephine Counties
Horkelia hendersonii	Rocky summit of Mount Ashland, Jackson County
Lewisia cotyledon*	Jackson, Josephine, and Curry Counties
Lilium rubescens	Wooded slopes, southern Josephine and Jackson Counties
Limnanthes floccosa ssp. bellingeriana*	Local endemic, Jackson and Klamath Counties
L. floccosa ssp. grandiflora*	Local endemic, Jackson County
L. floccosa ssp. pumila*	Local endemic, Jackson County
L. gracilis var. gracilis*	Widely disjunct populations, Josephine County, Rogue Valley
Lupinus aridus var. ashlandicus	Stony slopes, Mount Ashland, Jackson County
Microseris laciniata ssp. detlingii*	Grasslands, Siskiyou Pass, Jackson County
Mirabilis greenei	Southern Jackson County
Navarretia heterandra	Vernal pools, Jackson County
Orthocarpus cuspidatus	Grasslands, southern Klamath and Jackson Counties
Penstemon parvulus	Summit of Mount Ashland, Jackson County
Phacelia peckii*	Moist flats, southern Jackson County
Potentialla glandulosa ssp. ashlandica	Wet meadows, Mount Ashland, Jackson County
P. glandulosa ssp. globosa	Mount Ashland, Jackson County

---

* Species listed on the national list of threatened and endangered plants (Smithsonian Institution 1975).

1/ Species also known to occur in Idaho.

Species	Distribution
Saxifraga fragarioides	Mountain cliffs, Josephine and Jackson Counties
Schoenolirion bracteosum*	Mountain meadows, southern Jackson and Josephine Counties
Sedum laxum ssp. heckneri*	Dry cliffs, Jackson County
S. purdyi	Associated with Brewer spruce, southern Jackson County
Trifolium howellii	Moist slopes in woods, mountains of Josephine and Jackson Counties
Vaccinium coccinium*	Sandy slopes and ridges, mountains of Josephine County

Vascular Plants of Special Interest in the Eastern Slopes Province, Oregon Cascades

Astragalus applegatei*	Moist meadows near Klamath Falls, Klamath County
Castilleja chlorotica*	Mountains, southern Lake County (Gearhart Mountain); Three Sisters
Crepis bakeri ssp. cusickii	Dry slopes, Jackson and Lake Counties
Eriogonum umbellatum var. glaberrimum	Warner Mountains, southern Lake County
Lomatium peckianum	Dry hillside and pine woods near Bly, Klamath County
Penstemon glaucinus*	Pine forest, Gearhart Mountain, Lake County
Salix laevigata	Along streams, southern Klamath County
Silene nuda ssp. insectivora	Along Sprague River, Klamath County

Vascular Plants of Special Interest in the Basin and Range Province, Eastern Oregon

Astragalus alvordensis*	Sandy plains and hills, southern Harney and Malheur Counties (Alvord Valley)
Cirsium peckii	Streambanks, eastern slopes of Steens and Pueblo Mountains, Harney County
Eriogonum cusickii*	Rocky sagebrush areas
Lupinus biddlei*	Dry plains, southern Harney and Malheur Counties
Pleuropogon oreganus	Swampy ground, Lake and Union Counties
Ranunculus andersonii	Sagebrush desert and ponderosa pine forest; southern Lake County and southern Malheur County
Rhysopterus plurijugus*	On diatomite, Malheur, Harney, and eastern Lake Counties
Thelypodium brachycarpum*	Low, chiefly alkaline areas, southeast Oregon

Species	Distribution
Vascular Plants of Special Interest in the Owyhee Upland Province, Southeastern Oregon	
Astragalus iodanthus var. *vipereus*	Bluffs, eastern Malheur County
*A. mulfordae** [1]	Dry sandy ground, lower Owyhee River, eastern Malheur County
A. nudisiliquus	Gravelly bluffs, northeastern Malheur County
A. purshii var. *ophiogenes**	Sagebrush desert, Owyhee River, Malheur County
*A. solitarius**	Usually in sagebrush, Owyhee River, Malheur County
*A. sterilis**	Clay hills, Sucker Creek, Malheur County
Cryptantha propria	Dry hillsides, northern Malheur County
*Cymopterus corrugatus**	Dry hills, southern Malheur County
*Eriogonum novonudum**	Stony clay hills, eastern Malheur County
E. ochrocephalum ssp. *calcareum*	In loose, white volcanic ash, Malheur County
Hackelia cronquistii	Narrow endemic, known only from one site in Malheur County
*H. ophiobia**	Cliffs, 3 forks of Owhyee River, Malheur County
H. patens	Between Vale and Harper, Malheur County
*Mentzelia mollis**	Clay slopes, eastern Malheur County
Mirabilis bigelovii	Canyon of Owyhee River, Malheur County
Silene scaposa var. *lobata**	Local endemic in Southeastern Oregon
Trifolium owyheense	Dry slopes, Sucker Creek, Malheur County

Appendix B. Vascular Plants of Special Interest in Idaho

Province 4 - Columbia Intermountain

Section B - Malheur-Boise-King Hill

Taxon	Locality	Status
*Lepidium davisii**	Extension of Birds of Prey Area	Endemic
Eriogonum shockleyi var. *packardi*	As above	Endemic (?)
Langloisia punctata	As above	Great Basin & Southwest outlier
Teucrium canadense	As above	Widespread in moist areas
Lepidium montanum var. *papilliferum*	Canyon, Payette and Ada Counties	Endemic
Circium magnificum	Alkaline meadows	Endemic
Trifolium microdon	Sandy areas	Disjunct from Pacific states
Astragalus atratus var. *inseptus**	Camas County	Endemic

Section C - Owyhee Uplands

*Artemisia papposa**	S.R. plains and Owyhee Co.	Endemic
Astragalus iodanthus var. *vipereus*	As above	Endemic
*A. sterilis**	As above	Endemic
Limosella acaulis	Southern Owyhee County	Widespread, circumboreal
Downingia elegans	Southern Owyhee County	Pacific states

* Species listed on the national list of threatened and endangered plants (Smithsonian Institution 1975).

Appendix C. References for Rare and Endangered Plant Species

1. Research Natural Area Needs in the Pacific Northwest, 1975. U.S.D.A. Forest Service General Technical Report PNW-38. Pacific Northwest Forest and Range Experiment Station. Portland, Oregon.

2. Provisional List of the Rare, Threatened and Endangered Plants of Oregon, January 1976. Jean Siddall, Oregon Natural Area Preserves Advisory Committee, and Dr. Kenton Chambers, Oregon State University Herbarium.

3. Chambers, Kenton L., Working Draft, Rare and Endangered Plants of Oregon. 1974. Oregon State University, Corvallis, Oregon

4. Davis, Ray J. Flora of Idaho. 1952. Wm. C. Brown Co., Dubuque, Iowa

5. Henderson, Douglas, Rare and Endangered Plants of Idaho, in: Research Natural Area Needs in Idaho. A First Estimate. 1974. C. A. Wellner and F. D. Johnson. College of Forestry, Wildlife and Range Sciences, Univ. of Idaho, Moscow, Idaho

6. Hitchcock, C. Leo and Arthur Cronquist, Flora of the Pacific Northwest, 1973. Univ. of Wash. Press. Seattle and London

7. Johnson, Frederic D. and Robert W. Steele, A Tentative List of Uncommon Plants of Idaho, in: Research Natural Area Needs in Idaho. A First Estimate. 1974. C. A. Wellner and F. D. Johnson. College of Forestry, Wildlife and Range Sciences, Univ. of Idaho, Moscow, Idaho

8. Packard, Patricia. Personal communication. Professor of Botany, College of Idaho, Caldwell, Idaho

9. Peck, Morton E. A Manual of the Higher Plants of Oregon. 1961. Binfords and Mort, Portland, Oregon

10. Siddall, Jean, Total Listing of All Rare and Endangered Plants on Siddall/Research Natural Area/Chambers/Smithsonian Lists. Sept. 1975.

11. Siddall, Jean. Personal Communication. Oregon State Natural Area Preserves Advisory Committee, 535 S.W. Atwater Road, Lake Oswego, Oregon 97034

12. Steele, Robert W., A Directory to Disjunct and Endemic Plants of Central and Southern Idaho, March 1975. Forest, Wildlife and Range Experiment Station. Univ. of Idaho, Moscow, Idaho

13. Report on Threatened and Endangered Plant Species of the United States. 1975. Smithsonian Institution. U.S. Govt. Printing Office Serian No. 94-A.

ROBERT W. STRAUB
GOVERNOR

PUBLIC UTILITY COMMISSIONER OF OREGON

LABOR & INDUSTRIES BUILDING • SALEM 97310 • Telephone (503) 378- 6611

36

October 13, 1976

Mr. Murl Storms, Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Mr. Storms:

This will convey our comments on the responsibilities of public authorities, the Draft Environmental Impact Statement (DEIS), "Pacific Power & Light, proposed 500 KV Power Line, Midpoint, Idaho - Medford, Oregon", and the related proceedings.

FEDERAL, STATE, & LOCAL AUTHORITY

As you will recall from our discussion and correspondence 1/, the state and this agency are concerned that the federal authorities consider fully and adequately all the likely impacts of the proposed project within the State of Oregon, not just on federal lands.

Local authorities as well as state and federal must approve the project details (DEIS I 5,6). Some Oregon counties must grant conditional use permits. Counties and other agencies in Oregon may impose further reasonable conditions, each within its authority. The statute (ORS 758.010) that grants right-of-way across state public lands for public utilities also charges responsible officials to attach proper conditions.

Please find enclosed a copy of:

> Order 76-359 with "Certificate of Public Convenience and Necessity", and "Request for Proposals to Study Effects and Mitigations of High-Voltage Power Lines on waterfowl and habitat".

Please refer also to the testimony and exhibits in the State proceeding ("Cause No. UF-3182") which have been sent to you, and to your discussion and correspondence with the State of Oregon on the matter. You might refer especially to Governor Straub's letter to Mr. E. J. Peterson, acting state director, May 19, 1975, his reply of May 30, Howard Teasley's (PUC) letter to Richard Baumann (BLM), July 14, 1975, and Peterson's reply of July 25. These indicate the concern and authority of the State and this agency.

ORS 756.040(1) The commissioner . . . "shall represent the customers of any public utility, railroad, air carrier or motor carrier, and . . . he shall make use of the jurisdiction and power of his office to protect such customers, and the public generally, from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates."

The Governor designated this Commission as lead agency for the state to coordinate the state's review and decision on the proposed power line. Many State, federal, and local authorities took part in the investigation and hearing. From the record generated, I found the proposed line justified in the public interest and awarded the Certificate of Public Convenience and Necessity (enclosure 1). The certificate imposed a number of conditions but did not specify the route. Approval of the specific route awaits further developments and actions by you, Oregon counties, this agency, and federal and state authorities in Idaho. Approved termini are Midpoint, Idaho, Malin, Oregon and Medford, Oregon. Further route specificity will be provided by subsequent amendment to the certificate, as will any changes needed in other conditions.

I am charged to "represent the public generally", which requires that all tangible and intangible interests be balanced. The record established that the prime route required lesser outlays than the alternatives, both because it is shorter and because it would interfere less with commercial agriculture and forestry. Even though the cost of the line will increase rates only marginally, a significant increase in outlays would have to be justified by the prospect of avoiding significant environmental or esthetic harm or problems.

COMMENTS ON DEIS

Justification and Need

The Oregon Department of Energy was made an intervening party with respect to the forecast need for the line. The Department caused several questions to be resolved in the record, and the Department advises it has been satisfied as to justification and need. Pacific agreed during the hearings to refine and improve its forecasting.

The analysis of the power situation (DEIS I 7-17) may be outdated. The analysis assumed that Idaho Power would build the Pioneer plant at the site then proposed and that Pacific would own no part of the Pebble Springs project, and both have changed. Another possibility is the passage of the Nuclear Safeguards Initiative (Measure No. 9), which would cloud the future of Pebble Springs. It appears the discussion of resources assumed critical water conditions (DEIS I 15, Fig. I 5) and integration of Trona with the supply system (DEIS I 8, Table I 1). Possible changes in loads and the changes mentioned above could bring reconsideration of the project. Responsible authorities will have the benefit of current information, including the updated West Group forecast, before taking the final decision.

Measures in Mitigation

Among the conditions attached to the Certificate of Public Convenience and Necessity are measures to mitigate environmental impacts along whichever route is chosen. Pacific had offered a number of measures (DEIS IV 44-50), but the record evinced further esthetic and wildlife problems. The Oregon Department of Fish & Wildlife, among others, testified as to the need to protect ranges and populations of deer, antelope, upland game birds, raptors, and waterfowl. The proffered conditions were changed accordingly (Appendix A to Order 76-359), and the waterfowl issues referred to a special study (infra).

The same general protective measures should apply throughout Oregon. Where the DEIS does not pertain specificially to the prime route, the Certificate (Section IX) and DEIS (pp. IV 4-19) seem to require generally the same measures, eg:

Problem	DEIS measure	Certificate measure
Raptors	33	34
Forest clearing	9	21
Springs & Seeps	38	46

It appears uncertain that non-specular or non-reflective materials should be used through areas of daily waterfowl feeding flights (cf measure no. 25, DEIS p IV 13). Where non-specular materials do not increase hazards to wildlife, we may require them on non-federal lands in Oregon.

We anticipate that if the biologists were hired to assure contract supervision (measure no. 32, DEIS p IV 16), they would work on non-federal lands as well as on federal lands. We further anticipate that if the landscape architect were retained to assist with final line location in forested and highly scenic areas (measure no. 42, p IV 19), he would assist on non-federal lands as well.

Waterfowl

It transpired that the line might cause significant and unmitigated losses of waterfowl, especially in the proposed route across the Klamath Basin. Mr. Thomas Roster (an intervening party), the U.S. Fish and

Wildlife service, the Oregon Department of Fish and Wildlife, and others testified to this. The applicant and others testified that the potential impact, if any, would be minimal. The DEIS discusses the problem but not measures to lessen it (cf pp III 58, V 8).

I have accordingly deferred the State's decision as to where and how construction will be permitted, and have requested proposals for a panel of experts to advise as to impacts upon waterfowl in Klamath Basin and other critical areas (enclosure 2). The panel will be charged to investigate whether the line would cause significant loss of individuals, or by behaviorial inconsistency lead to loss of habitat or changes of species composition, and if either appears probable, what route changes and other feasible measures would reduce the likely impacts. Direct losses of individuals would occur if they collided with the line. Indirect losses of individuals, loss of habitat, or change of species composition would occur if birds' behavior makes their continued use of the range inconsistent with a line across the range. The panel will be appointed shortly and will report early in 1977.

This waterfowl study should be useful to all levels of government. Any information you can provide the panel will be appreciated. We shall furnish the results for consideration in your final decision and statement.

In view of the responsibility of federal, state, and local authorities and of the potentially significant impacts on waterfowl, we expect the final statement to address alternatives to the prime route across the Klamath Basin, and any other measures in mitigation. We appreciate that the DEIS has been long in preparation, and we trust the final impact statement will deal more fully with these issues.

Socio-Economic Impacts

The DEIS discusses socioeconomic impacts in the market area (DEIS, III-129), to the effect that the line and the power it would provide would not induce growth, but would accommodate foreseeable loads better than any alternatives. The record developed in our proceeding generally supports that. A number of agencies, firms, and private persons assumed the line would affect future growth in local population and economic activity, and argued that it would be good or bad to do so. My staff testified that the line would not induce growth because it would neither

remove an energy constraint nor lower the price of electricity. Resolving the question of justification of the public interest appeared to require no specific findings on this issue.

Yours sincerely,

CHARLES DAVIS
Commissioner

CD:HT:dg
Enclosures (2)
cc: Governor Straub
Oregon Congressional Delegation
Public Utility Commission of Idaho
Department of Fish & Wildlife
Division of Inter-Governmental Relations
Chief, Bureau of Land Management
Regional Director, U.S. Fish and Wildlife Service
Mr. Elwood Hedberg, Pacific Power & Light Company

PUBLIC UTILITY COMMISSIONER OF OREGON

LABOR & INDUSTRIES BUILDING • SALEM, 97310 • Telephone (503) 378-6355

ROBERT W. STRAUB
GOVERNOR

CHARLES DAVIS
Commissioner

August 30, 1976

REQUEST FOR PROPOSALS TO STUDY EFFECTS AND MITIGATIONS OF HIGH VOLTAGE POWER LINE ON WATERFOWL AND HABITAT

The Public Utility Commissioner of Oregon invites proposals from independent expert individuals and groups. From among them he will appoint a panel to investigate and to advise him this winter as to probable effects and appropriate mitigations in building a 500,000 volt power transmission line across or near significant winter concentrations of waterfowl on the Pacific flyway in Klamath and Lake Counties in south-central Oregon.

The two potential concerns are:

1. collisions of birds with the line or towers, both game and non-game birds;

2. influence the line would have on waterfowl use patterns in the area.

If either concern appears significant, the panel will advise the Commissioner on local route changes and other reasonable measures to reduce the likely problems.

The principle area concerned is:

the Klamath Basin, Klamath County, Oregon, north of the lower Klamath National Wildlife Refuge (Tulelake, CA).

The line will also cross (or skirt) one or more of these areas, depending on actions by other agencies:

Warner Valley, between Hart and Crump Lakes, and near Plush, Lake County, southwest of the Hart Mountain National Antelope Refuge;

ORS 756.040(1) The commissioner . . . "shall represent the customers of any public utility, railroad, air carrier or motor carrier, and . . . he shall make use of the jurisdiction and power of his office to protect such customers, and the public generally, from unjust and unreasonable exactions and practices and to obtain for them adequate service at fair and reasonable rates."

Sycan and Sprague Rivers near Beatty, Klamath County;

between Silver and Summer Lakes, Lake County.

Please see the sketch maps (1-3) attached. The investigation will include field study, review of the record developed in public hearings, and survey of applicable literature and data.

Proposals must be received by October 4, 1976. The award will be made October 15, 1976, and the study will commence soon thereafter. Tentative conclusions should be received by January 21, 1977, and the final report by March 4. For a panel of three researchers, the investigation and report would require some 50 to 100 researcher days, including field study; clerical, local transportation, and other support services will be furnished by the Public Utility Commissioner's office. Tentative contract limit is $15,000.

Suggestions are invited as to possible participants and study design. All replies will be considered and acknowledged.

Proposals are invited from individuals and teams, and team members may also be considered as individual researchers. Proposals and participants will be evaluated as to expected contribution to resolving the questions of waterfowl effects and including but not limited to the following considerations. The panel will include at least one trained, experienced waterfowl biologist. Expertise in ecology and animal behavior is also desirable. The panel may need to work with state, federal, local, and power company officials, and to relate their recommendations as to routing to other aspects and considerations. The panel will use an autecological approach, focusing on a subset of each system affected but not ignoring the entire system, nor ignoring other land uses, values, costs, and technical feasibility. To assure independence, every researcher must disclaim any personal interest in the study results and route selected.

Address replies and information requests to:

Public Utility Commissioner of Oregon
Attention: Howard Teasley, Project Manager
Labor and Industries Building
Salem, Oregon 97310 (1-503-378-6355)

STUDY BACKGROUND

Pacific Power & Light Company proposed in the spring of 1975 to construct the 500,000 volt transmission line from Midpoint (near Twin Falls), Idaho, to Malin and Medford, Oregon, along the

route selected by its consultant, VTN-Oregon. (Cause No. UF-3182) The public Utility Commissioner was designated the lead agency to develop the state response and to balance interests and considerations, though Oregon has no State Environmental Policy Act as such.

Pacific applied to the Commissioner in June, 1975 and a formal investigation was undertaken. Public hearings were held in Salem, Medford, Klamath Falls, and Lakeview, Oregon, in December, 1975.

It appeared during the December hearings that while most foreseeable impacts could be satisfactorily mitigated, significant waterfowl interference might well remain. As stated above, the particular question is whether the line would cause significant loss of individuals or by behavioral inconsistency lead to loss of habitat or change in species composition and if either, what route changes and other feasible measures would reduce the likely impacts. The subsequent hearing in March did not resolve the issues to the Commissioner's satisfaction.

The line (and alternates) as proposed by the applicant and the BLM would cross the Klamath Basin where the Pacific flyway is constricted to a span of some 7 miles. It is estimated that 80% of the migrating waterfowl of the Pacific flyway use the basin at the peak of the fall migration. The five million birds include 4.5 million ducks, 250,000 geese, 360,000 coots, 6,000 swans, 4,000 grebes, 4,000 terns, 1,000 white pelicans, and 800 cormorants - said to be the highest concentration in North America. It was alleged, but neither proved nor disproved in the record, that the proposed east-west line in a north-south feeding and nuptial flyway would threaten collisions and other interference, with consequent avian mortality and effective habitat loss.

Additional local route alternatives and other measures were suggested during the hearings. Lesser but still significant potential impacts could arise in the other areas mentioned above.

The interim order awarded the line the requisite Certificate of Public Convenience and Necessity and attached mitigating conditions, but left open the questions of the route through critical waterfowl areas:

> "12. In response to the limited issues of [waterfowl] the Commissioner will appoint a panel... to advise the Commissioner as to whether the proposed transmission line will pose a significant substantial impact upon waterfowl. The Commissioner accordingly will defer determination as to whether the public convenience and necessity [are] best served by this specific route proposed by PP&L until such time as the Commissioner has had the benefit of such advice.

"14. The Commissioner has considered all other issues raised by interested persons making limited appearances, and finds that all such issues either (i) have no merit; (ii) are not of such significant concern or impact as to outweigh the need for the proposed line or criteria by which the prime route has been selected, in view of the mitigations as stipulated in Appendix A and finding of fact 12; or (iii) PP&L has resolved such issues by appropriate action or by clarifying the subject matter thereof. The specific route evenutally approved will have been chosen to balance economic, engineering, and aesthetic considerations so as to minimize any adverse impact."

Construction would also require approval by the Public Utility Commission of Idaho and by the U.S. Bureau of Land Management (BLM) State Directors in Oregon and Idaho. The BLM draft Environmental Impact Statement (DEIS) is now available. The BLM and Idaho Commission hearings are set for late September and early October. The BLM DEIS considers alternate routes as well as that the company proposed, but none of the alternates seems likely to avoid the potential Klamath Basin problems. Klamath County and perhaps other local governments would have to approve conditional use permits as well.

PHYSICAL CHARACTERISTICS

The line would consist of three 3-wire bundles, or nine conductors, each at least 1.316" in diameter. Bundles would hang 30 to 35 feet apart suspended from towers averaging 140 feet in overall height. Two 3/8" galvanized steel cables would be strung along above the line, supported at the peaks of each tower, for lightning protection. The conductors would droop from 120 feet to a 38 to 55 foot minimum ground clearance. The towers would be free-standing, four-legged galvanized steel structures placed an average of 1,250 feet apart. Towers would be some 80 to 90 feet wide at the top and 22 to 33 feet at the base.

The climatic conditions along the proposed route are characterized by wide range in temperature, considerable variability in precipitation, differences in snow depth at higher elevation, and winter storms throughout the region. About 55% of annual precipitation occurs during the months of November through March. Annual precipitation would range from around 9 to 22 inches over these segments. Ground fogs and winds occur fairly frequently during fall and winter months. (These may complicate the study, and are said to cause birds to fly at transmission-line heights during late twilight and early dawn flights.)

HAT:lab

Attachment 1

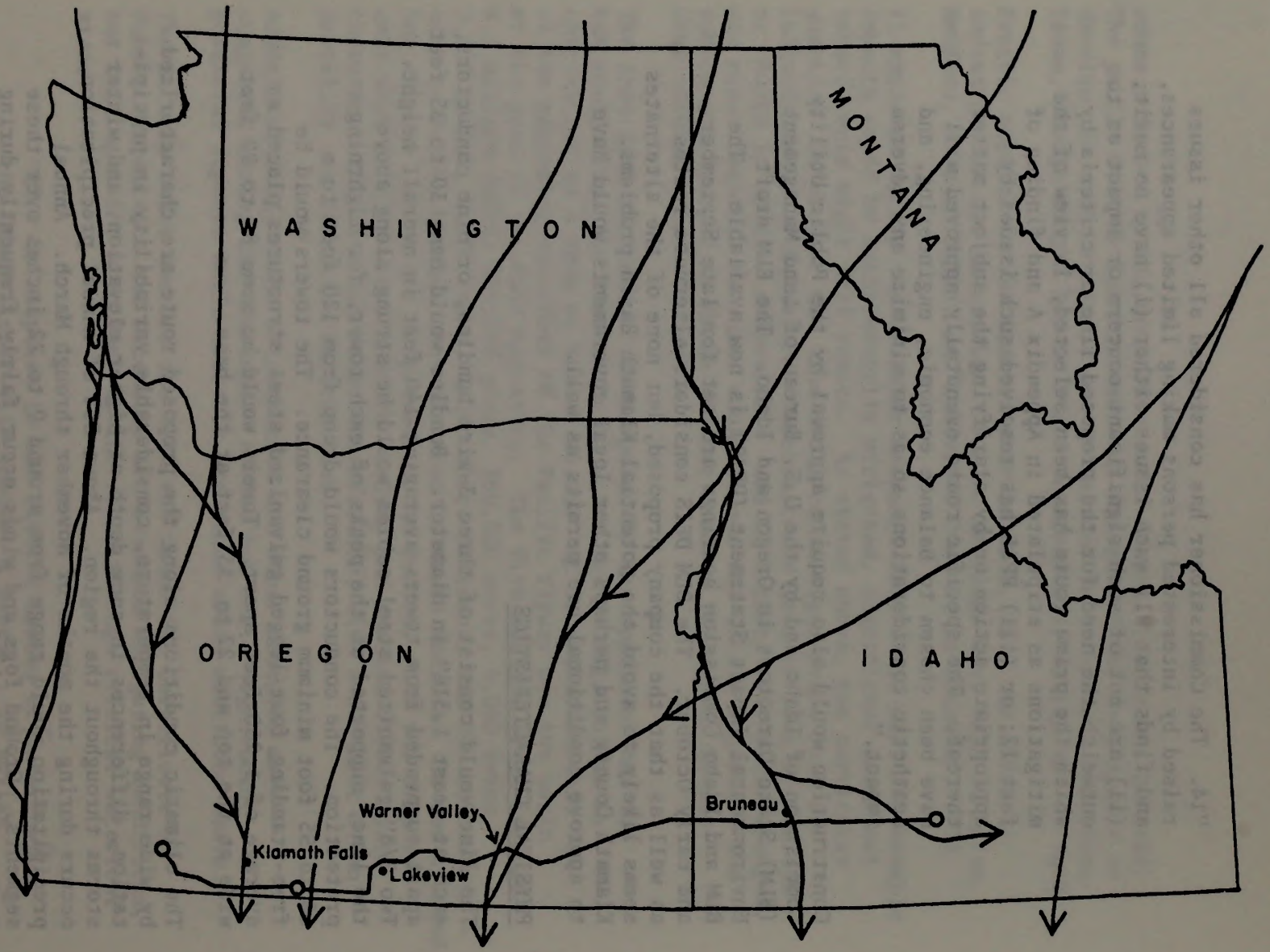
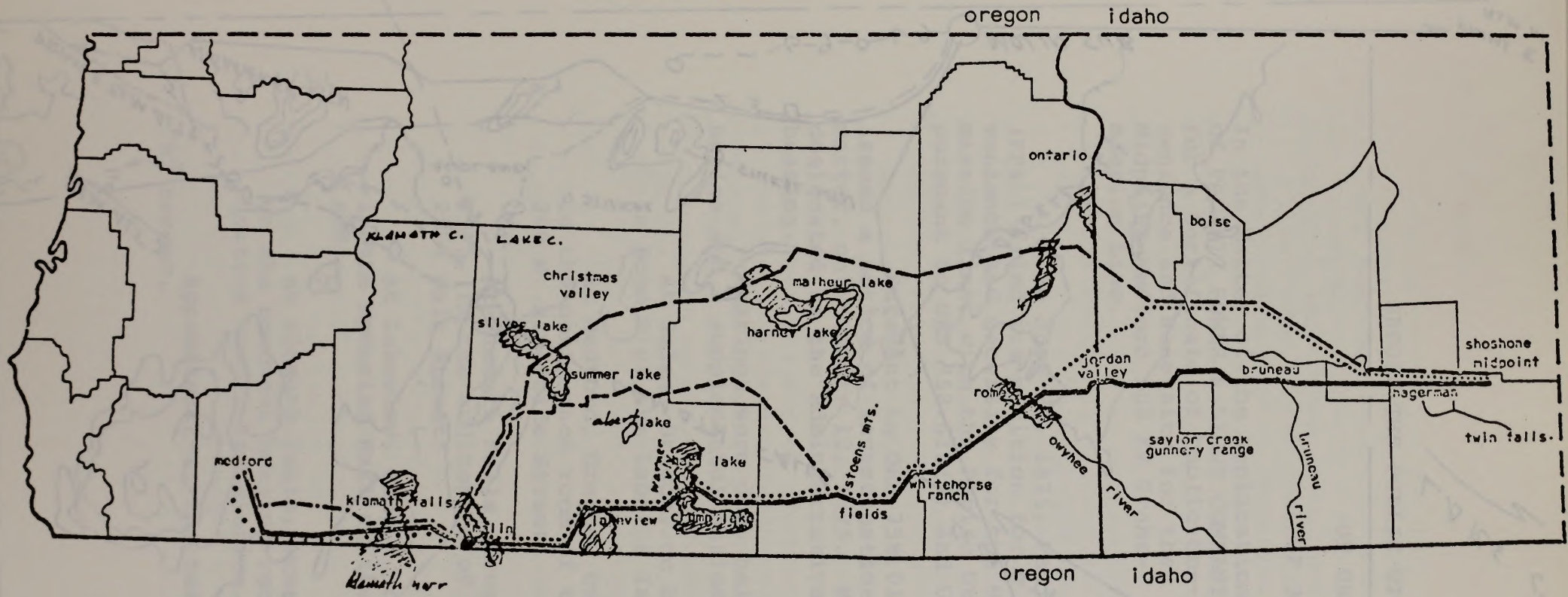


FIGURE II-9 WATERFOWL MIGRATION ROUTES →
(Flyway data from Oregon Dept. of Fisheries & Wildlife, 1975, and "Waterfowl Tomorrow," USDI, 1965)



WATERFOWL CONCENTRATIONS

PROPOSED 500 K V LINE ——————

MALIN TO MEDFORD:

alternate route 1 . . . . . .

alternate route 2 —.—.—.—.

MIDPOINT TO MALIN:

alternate route 1 — — — —

alternate route 2 .....

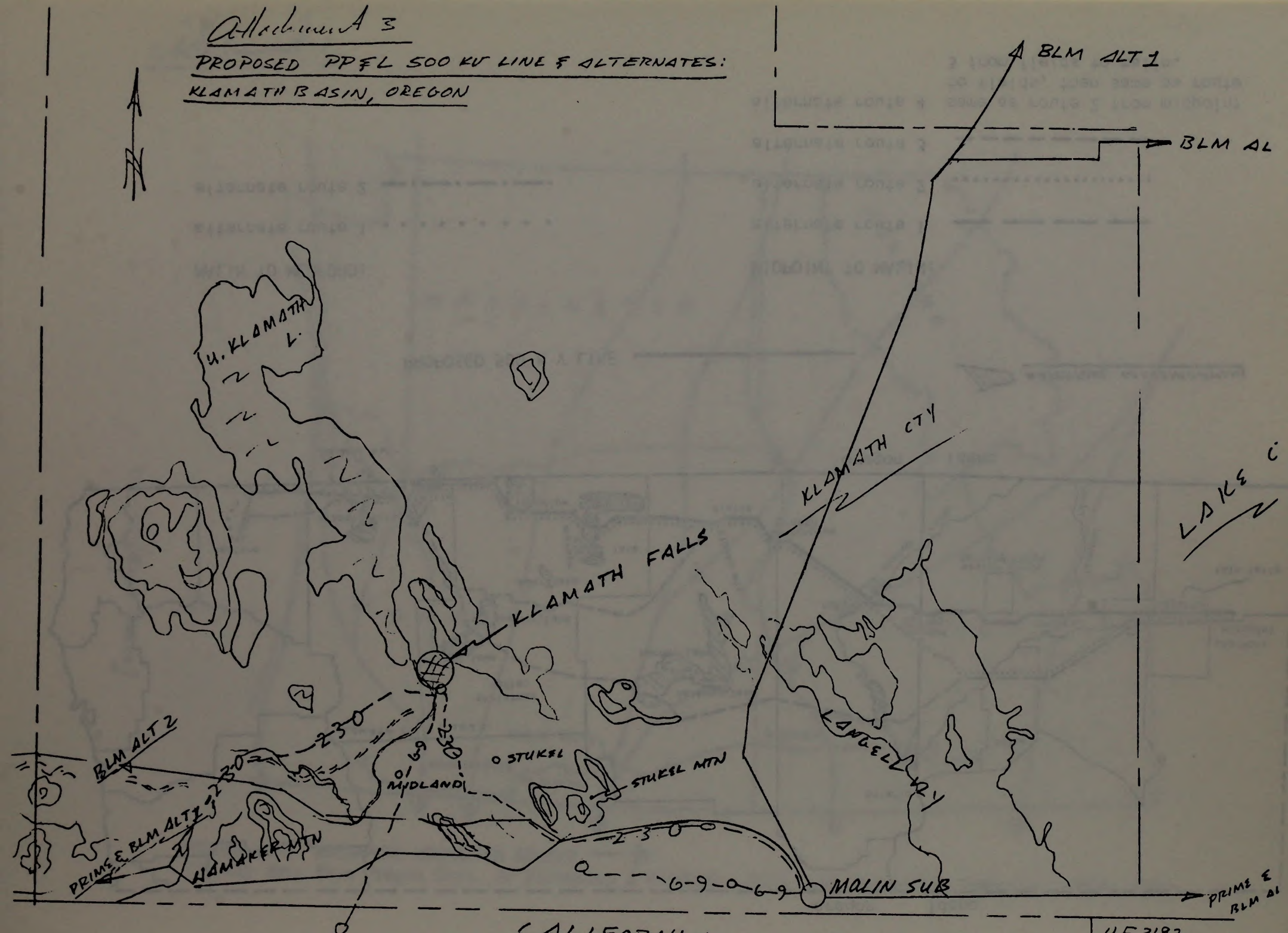
alternate route 3 — — — — —

alternate route 4 same as route 2 from midpoint to fields, then same as route 3 from fields to malin.

Attachment A 3

PROPOSED PP&L 500 KV LINE & ALTERNATES:

KLAMATH BASIN, OREGON



UF 3182

40 1 MAR 76

1:500 000

Order # 76-359

BEFORE THE PUBLIC UTILITY COMMISSIONER

OF OREGON

UF 3182

In the Matter of the Application of PACIFIC POWER & LIGHT COMPANY for a Certificate of Public Convenience and Necessity for the Midpoint-Medford 500 KV Transmission Line.	))))))	ORDER

On June 26, 1975, Pacific Power & Light Company (PP&L) filed its petition for a certificate of public convenience and necessity for the Midpoint-Medford 500 kv transmission line, with the Public Utility Commissioner of Oregon, pursuant to ORS 758.015(1) and OAR 860-25-030.

Pursuant to ORS 758.015(2), the Commissioner issued a notice of investigation and hearing in the above matter, on November 12, 1975. Mr. Richard W. Sabin was designated as the Administrative Law Judge to conduct such hearing.

Hearings were duly held in accordance with said notice and a supplemental notice as follows:

At Salem, Oregon, on December 1 and 2, 1975, in Room D of the Labor & Industries Building;

At Medford, Oregon, on December 16, 1975, in the conference room of the Red Lion Motel, 200 N. Riverside Street;

At Klamath Falls, Oregon, on December 17, 1975, in the auditorium of the Ponderosa School, 2554 Main Street;

At Lakeview, Oregon, on December 18, 1975, in the Memorial Hall of the Lake County Courthouse; and

At Klamath Falls, Oregon, on March 2, 1976, in the basement hearing room of the Klamath Production Credit Association, 900 Klamath Avenue.

Appearances at the hearings are shown on Appendix "B" hereto.

At such hearings, testimony and evidence were presented by PP&L, the Commissioner's staff, the Oregon Department of Energy, the Oregon Department of Fish and Game, the Oregon Department of Agriculture, the Oregon Department of Environmental Quality, the Economic Development Commission, Mr. Thomas A. Roster (an intervening party), and numerous persons who made limited appearances as "participants" as that term is defined in OAR 860-11-045(1). The testimony and statements of the foregoing parties and participants are contained in the transcript of this proceeding.

On September 17, 1975, the Oregon Department of Energy filed a petition for leave to intervene as a party to this proceeding. Such petition was granted and the Oregon Department of Energy has participated as a party herein.

On February 26, 1976, Mr. Thomas A. Roster filed a motion to be made a party to this proceeding. Pursuant to stipulation by Mr. Roster's counsel, his motion was granted subject to the condition that his participation as a party would be limited to the issue of the impact of the proposed transmission line upon waterfowl in the vicinity of Lower Klamath Lake, Klamath County, Oregon.

The record herein consists of the petition and all exhibits thereto, the testimony and statements of the parties and participants, and all exhibits introduced in connection therewith (as contained in the transcript herein), all correspondence and written statements received by the Commissioner from the parties, interested state agencies and other interested persons, the report of the Commissioner's staff with respect to the proposed transmission line, and the transcript herein.

Based upon that record, the Commissioner finds, concludes, and orders as follows:

FINDINGS OF FACT

1. PP&L is a Maine corporation duly qualified to transact business in the State of Oregon and a public utility subject to the jurisdiction of the Commissioner. Its utility function consists of generating, purchasing, transmitting, and distributing electric energy, and providing water and steam heat service, in parts of Oregon, Washington, Wyoming, California, Montana, and Idaho.

2. The petition conforms to the provisions of ORS 758.015 and the applicable rules and regulations of the Commissioner.

3. PP&L proposed to construct a 500 kv alternating current transmission line, approximately 478 miles in length, from the Midpoint Substation in South Central Idaho to a proposed new substation near Medford, Oregon. Approximately 343 miles of the line will be within the State of Oregon. Estimated cost of the project, including expansion of the existing substations at Midpoint and Malin, Oregon, construction of a new substation at Medford, and construction of a voltage compensating station at Fields, Oregon, is approximately $123,741,000 (based on a 1978 completion date and escalated to that date). Of that sum, the portion of the project located within the State of Oregon is estimated to cost $85,638,000.

4. The proposed 500 kv transmission line will be an overhead three-phase alternating current line. Each phase will consist of a three-conductor bundle, making a total of nine conductors for transmitting electricity. Lightning protection will be provided by two shield wires supported at the peaks of each tower. The conductors will be suspended from the towers by "V" string insulator assemblies. Each "V" will consist of 50 insulators (25 on each side) and will weigh approximately 600 pounds. The conductors are to be 1.316 inches in diameter (for some special applications, 1.345 inch diameter) and composed of stranded aluminum with a single steel core wire. The three conductors of each phase are to be 18 inches apart and will be suspended by spacer-dampers at intervals throughout each span. Spacing between phases will be 30.5 feet. The proposed towers will be free-standing metal structures. Different designs will be used according to structural requirements at particular tower sites. The height of a typical tangent tower will be 120 feet compared to 100 feet for angle and deadend towers. A typical tangent tower will weigh approximately 17,000 pounds. Tower bases will vary with tower height. A typical tangent structure will have an area of 22 feet by 29 feet at the base. Tower height, location and span length will be governed primarily by the terrain being traversed. The minimum clearance between the conductors and the ground will be 38 feet, and clearance will be increased to 45 feet for crossing major highways, 42 feet for cultivated lands, and 55 feet for railroads. The average span length will be approximately 1,250 feet, corresponding to 4.2 structures per mile. Tower structures will be erected on cast-in-place concrete cylinder footings or metal grillage-type footings under average soil conditions. Through areas of soft or unstable soil conditions, cast-in-place reinforced concrete spread footings will normally be used, with drive-pile footings utilized in cases of extremely unstable soil conditions such as marsh or wetland.

5. The proposed transmission line will serve the primary function of transmitting electric energy generated at petitioner's coal-fired generating plants in the State of Wyoming to PP&L's customers in the western portion of its system, primarily in Oregon. It will also provide a direct means of supplying power to meet PP&L's public utility responsibility in Southern Oregon by increasing the transmission capacity to that area. The proposed line will increase capacity and reliability of the Pacific Northwest Transmission Grid, and will substantially increase the ability to transfer surplus power available from the southwest, Utah or Colorado. The proposed line will provide additional system stability and reliability by offering an alternative transmission path when other lines are out of service because of maintenance or damage. The line will increase the capacity for exchanges of power between the western and eastern portions of the Northwest Power Pool, permitting the resources of the region to take further advantage of daily and seasonal load diversity. The line will permit back-up transmission capacity for service to the eastern portion of the Northwest Power Pool in the event of outages on the generating plants in that area.

6. PP&L has prepared future energy demand forecasts which have been reviewed by the Commissioner and the Oregon Department of Energy. PP&L's forecasts are not unreasonable and provide an appropriate measure of growth of electric energy demand within the next 10 years.

7. Based on PP&L's energy demand forecasts, uncontested by the Department of Energy, PP&L will have the need to provide in excess of 800 average megawatts of electric energy per year (at a rate of delivery in excess of 1,300 megawatts) to its customers in the western portion of its system which can best be served from its generating plants in the eastern portion of its system, commencing in 1978. Electric energy demand on the western portion of petitioner's system is forecast to increase at the rate of 5.9% per year for the next 10 years.

8. If the foregoing anticipated increases in future electric energy demand are not met, serious economic and social dislocation is probable.

9. PP&L has considered alternative means of meeting the foregoing anticipated increases in future electric energy demand, including (i) alternative locations for generating facilities, (ii) purchase of power from others, (iii) alternative forms of generation, (iv) alternative transmission systems, and (v) alternative routes for the proposed line.

10. PP&L has demonstrated (i) that the electric energy required to meet the anticipated future energy demands is or will be available from petitioner's coal-fired generating plants in the eastern portion of its system and that it would be duplicative and wasteful of resources to construct additional generation in the vicinity of the load centers at this time; (ii) that no other utility or entity has surplus energy available for sale to petitioner on a firm basis at the time the energy is needed; (iii) that alternative forms of energy generation (such as solar, wind, tidal, nuclear fusion, magnetohydrodynamics, oil, gas and geothermal) are either not available under current technology, or would not be economically feasible, or could not be applied to a generating plant with the required capacity, within the period of time at issue in the instant proceeding; (iv) that alternative transmission systems would require substantially more miles of transmission lines at greater capital cost and would not yield the same advantages to the regional and inter-regional transmission grids and interconnected power systems as the proposed transmission line.

11. The United States Bureau of Land Management (BLM) is in the process of preparing an Environmental Impact Statement under Section 102(2)(C) of the National Environmental Policy Act, 42 USC 4333 (2)(c), and is studying petitioner's proposed route over United States lands. The primary focus of the Bureau of Land Management Environmental Impact Statement is the environmental impact of the proposed line, and no final approval of the proposed route by BLM will be forthcoming until the environmental review process has been completed.

12. In response to the limited issues raised by Mr. Thomas A. Roster, the Commissioner will appoint a panel to review the record herein and to advise the Commissioner as to whether the proposed transmission line will pose a significant and substantial impact upon waterfowl. The Commissioner accordingly will defer a determination as to whether the public convenience and necessity is best served by the specific route proposed by PP&L until such time as the Commissioner has had the benefit of such advice.

13. Electromagnetic radiation generated by transmission lines operating at a capacity of 500 kv has not been demonstrated to be hazardous to human health or the health of domestic stock or wildlife, either on a long or short term basis.

14. The Commissioner has considered all other issues raised by interested persons making limited appearances, and finds that all such other issues either (i) have

no merit; (ii) are not of such significant concern or impact as to outweigh the need for the proposed line or the criteria by which the prime route has been selected, in view of the mitigations as stipulated in Appendix A and finding of fact number 12 herein; or (iii) PP&L has resolved such issues by appropriate action or by clarifying the subject matter thereof. The specific route eventually approved will have been chosen to balance economic, engineering and esthetic considerations so as to minimize any adverse impact.

15. The proposed transmission line will be constructed, operated and maintained in accordance with the applicable provisions of the 1973 Edition of The American National Standard, National Electrical Safety Code, C2, and thus is deemed to be safe.

CONCLUSIONS OF LAW

Based on the applicable standards and regulations, the record herein and the foregoing findings of fact, the Commissioner concludes that:

1. The Commissioner has jurisdiction over the petitioner and the proposed transmission line with respect to the issuance of a Certificate of Public Convenience and Necessity.

2. The petition and the proceedings herein conform to applicable law.

3. The construction, maintenance and operation of the proposed transmission line will be in accordance with all applicable law.

4. The proposed transmission line is necessary to enable petitioner to provide adequate service at reasonable rates; can be constructed, operated and maintained in a safe manner; is practicable; is justified in the public interest; and the public convenience and necessity require that it be constructed under the conditions set forth herein, between the terminals proposed, and along the route proposed except as modified as provided in this order.

5. A Certificate of Public Convenience and Necessity should be issued subject to the conditions contained therein.

359

Order # 76-359

ORDER

IT IS HEREBY ORDERED that the Certificate of Public Convenience and Necessity, Appendix "A" hereto, be and it hereby is, issued to the Pacific Power & Light Company.

Made, entered and effective May 28, 1976.

Charles Davis

CHARLES DAVIS
Public Utility Commissioner

APPENDIX "A"

CERTIFICATE OF
PUBLIC CONVENIENCE AND NECESSITY
(500 KV Transmission Line)

To the extent herein specified, limited and conditioned and subject to the express warranties herein made, this certificate authorizes Pacific Power & Light Company (PP&L) to construct a 500 KV AC transmission line from the Midpoint switching station which is located approximately 20 miles north of Twin Falls, Idaho, to Medford, Oregon, and if it deems necessary, to exercise the power of condemnation in accordance with state law to acquire land or land rights in connection with the construction, operation and maintenence of that line.

I. Description of the line:

The line will consist of three three-wire bundles, or nine conductors, each 1.316 inches in diameter for most of the line, with some bundles of 1.345 inches in diameter. Bundles will be 30.5 feet apart in a triangular configuration suspended from towers averaging 118.5 feet in overall height. Towers will be free standing four-legged galvanized steel structures placed an average distance apart of 1,250 feet. Two 3/8-inch galvanized steel cables supported at the peaks of each tower will provide lightning protection. The line will require substantial additional terminal equipment at all termini and one reactor compensating station between Midpoint, Idaho, and Malin, Oregon.

II. Route:

Approved termini are Midpoint, Idaho, Malin, Oregon, and Medford, Oregon. Further route specificity will be provided by subsequent amendment to this certificate.

III. Warranties:

PP&L warrants that:

(1) It will take those actions including compliance with all applicable federal, state and local statutes, rules and regulations, necessary to insure that construction, operation and maintenance of the line pose the least practicable risk of damage to the public health and safety and the natural environment of the State of Oregon, including but not limited to the actions described under paragraph IX, "Mitigations."

(2) It will construct the line and place the line in service prior to December 31, 1978, unless construction or operation is delayed by reason of circumstances beyond the control of Pacific Power & Light Company.

(3) The line will conform to the description and route herein specified.

(4) It will notify the Commissioner in writing whenever it first appears that a breach of any warranty or condition herein has occurred or is likely to occur.

(5) It will advise each landowner, by a copy of this Certificate, of the availability of all mitigating measures specified in Article IX hereof.

(6) It will maintain the necessary degree of control over construction contractors and subcontractors to assure compliance with all other warranties herein.

IV. Conditions:

The authority granted herein is conditioned upon:

(1) PP&L obtaining complementary regulatory authority from the State of Idaho for construction of the line.

(2) PP&L obtaining all necessary rights-of-way from landowners not requiring condemnation.

(3) Construction being commenced before December 31, 1976, unless delayed for reasons beyond the control of Pacific Power & Light Company.

(4) Acceptance of all the terms of this Certificate by PP&L, such acceptance to be acknowledged by execution of this Certificate as specified in paragraph X, "Effective Date."

(5) Final route approval by amendment to this Certificate.

V. Condemnation:

At least 30 days prior to the commencement of any condemnation proceeding under this Certificate, PP&L shall comply with OAR 860-25-030(1)(f) by filing the required information with the Commissioner. The information shall also be served on the landowner along with a copy of this section of this Certificate and proof of service shall be filed with the Commissioner. The landowner may ask for a further hearing stating his reasons in writing to the Commissioner. The Commissioner may but will not necessarily convene a hearing. If no hearing is noticed prior to the expiration of the 30 days, condemnation may proceed according to law. If a hearing is noticed, condemnation is not authorized until otherwise ordered by the Commissioner. The scope of any further hearing will be limited to issues relating to the physical characteristics of the line and route in the immediate vicinity of the land to be condemned.

VI. Amendment of Certificate:

In the event PP&L or the Commissioner desires to amend the terms of this Certificate either may propose an amendment in writing to the other. The Commissioner may seek comments from affected persons and may convene a hearing on the proposal. If PP&L objects to an amendment, it shall not become effective prior to notice and hearing unless the Commissioner declares an emergency. On a declaration of emergency, the Commissioner may amend this Certificate effective immediately for a period of no more than 120 days and shall if requested convene a hearing on the amendment within 30 days of the request.

VII. Controversies:

The Commissioner retains primary jurisdiction over any controversies arising out of this Certificate between or among PP&L, the Commissioner, his staff, and parties to UF 3182, except controversies arising in judicial condemnation proceedings.

VIII. Enforcement:

At the time this Certificate becomes effective it constitutes an order of the Commissioner. Breach of any warranty or condition herein is a failure to obey an order of the Commissioner.

IX. Mitigations:

PP&L agrees to:

Land and Water Resources

1. Design work roads to follow natural contours of the land to the extent practicable or feasible.

2. Site towers and roads to minimize effects on present land uses and to avoid silhouetting or sky lighting of structures on ridge tops, high points or canyon rims to the extent practicable or feasible.

3. Confine vehicular traffic to approved work roads and construction sites.

4. Design parking areas to minimize clearing.

5. Restore and revegetate work roads as soon as practicable.

6. Place excavated material away from stream flows.

7. Align culvert outlets with natural drainage courses.

8. Repair erosion damage immediately.

9. Stabilize all cut and fill slopes.

10. Use hydro seeding or other special seeding techniques where appropriate.

11. Not use sidecast construction where the placement of loose material could erode or cause silt damage to streams or reservoirs, or where silt would damage vegetation or ground cover.

12. Take special soil stabilization measures as necessary along those portions of the route which traverse shallow or unproductive soils, steep slopes, or areas of uncontrolled, high use cattle grazing.

13. Avoid clearing to mineral soil where possible, and where necessary to do so, restore top soil to original contour.

14. Use existing roads to the extent possible.

15. Develop access roads to only that degree necessary to allow access for four-wheel drive maintenance vehicles unless the owner of the lands involved requests otherwise.

16. Construct work roads on or near the right-of-way so as to provide direct access to structures unless the owner of the lands involved requests otherwise.

17. Use no herbicides, pesticides or defoliants on the right-of-way except when absolutely necessary, and then use only those chemicals approved by the agency controlling the land which do not persist in the environment.

18. Preserve all trees, shrubbery, and other vegetation that need not be cleared or removed during construction or maintenance.

19. Protect low growing trees, shrubs, herbs, grasses, and the top soil during construction.

20. Clear only that vegetation necessary to string the line across canyons.

21. Designate each tree outside the right-of-way to be removed. Cut or top the absolute minimum number of trees within the right-of-way, taking into account location of trees with respect to the line and their capacity for growth, and do less cutting or topping toward the edges of the right-of-way.

22. Leave no cleared material piled on hillsides, along roadways, or in areas that have not been designated by the landowner for such purposes.

23. Dispose of brush, timber, and other wood products by chipping or shredding rather than burning, to the extent practicable. Any burning operations shall be conducted in accordance with applicable regulations.

24. Where fire hazards exist, equip vehicles and gas powered equipment with spark arresters.

25. Establish an adequate project fire plan, provide suitable equipment and instruct personnel on implementing the plan.

26. To the extent practicable, perform clearing and road building so as not to increase access in areas of critical wildlife habitat.

27. At the request of landowners or lessees, provide double locked chain type gates to restrict access.

28. Schedule construction at the time of year when the least amount of damage would be done to soil, vegetation, and wildlife.

28a. To the extent practicable, arrange the line location and tower location with existing or anticipated irrigation facilities in cooperation with landowners or lessees.

28b. Reseed disturbed land to browse, grass, legume and herb species as landowners, lessees, and appropriate regulatory agencies direct.

Fish and Wildlife Resources

29. Avoid machine clearing near streams to the fullest extent possible.

30. Flag or otherwise designate crucial or important wildlife habitat areas where they occur to alert workmen.

31. Observe road closures in effect for wildlife protection or management purposes.

32. Exercise caution as appropriate to prevent disturbance or harrassment of wildlife, particularly during nesting or breeding periods, by helicopters or other equipment.

33. Prohibit firearms on the project.

34. Adjust tower sites to avoid to the fullest extent possible any existing nests of such birds as eagles and ospreys, and install eagle nesting platforms to replace destroyed nesting sites.

35. Construct the line in conformance to the USDA-USDI "Environmental Criteria for Electric Transmission Systems."

36. Keep noise levels in and near residential areas to a reasonable minimum, and comply with all applicable noise regulations and standards.

37. Use water trucks to control dust where desirable in the vicinity of residential neighborhoods or agricultural developments.

38. Flag historical or archeological areas prior to the start of construction and instruct personnel to report any finding whether in designated areas or otherwise.

39. Take precautions to protect in place all fences, public lands, survey monuments, private property corners, and forest boundary markers.

40. Provide fully-contained sanitation facilities in personnel and material marshalling areas.

41. Require construction personnel to utilize existing sanitary facilities.

42. Dispose of sanitary wastes in approved disposal areas.

43. Suppress reactor and transformer noise to the levels required by applicable regulations and standards.

Other Measures

44. Remove all berms and waste ridges along the edges of disturbed areas by spreading the material over the areas from which they were removed.

45. Scarify or contour rip all crane pads, pulling and stringing sites, temporary roads and all other where scarifying is necessary to reestablish vegetation.

46. Identify and avoid construction to the extent practicable on springs or seeps:
    a. located within 200 feet of the edge of the right-of-way;
    b. located within 200 feet of any new access road;
    c. located within 200 feet of the boundaries of any marshalling or assembly areas.

47. Remove within 90 days after the conclusion of the construction operation all construction materials and related litter and debris.

48. Remove within 90 days after the conclusion of the construction operation all vegetative matter accumulated through land clearing except that matter more suitably chipped or shredded and spread over the cleared land.

49. Restore all work roads to conditions which prevailed prior to commencement of construction unless the landowner desires that such roads be left in place, and remove all surplus buildings and equipment, lumber, refuse, fencing or any other items not at the site prior to construction.

50. Investigate any complaints about radio or television interference and, in those cases where poor radio and television reception is the direct or probable result of the line, make the necessary changes to remedy the situation.

51. To the extent practicable, retain existing vegetation to screen sensitive esthetic areas.

X. Effective Date:

This Certificate shall become effective immediately upon the return to the Commissioner of a copy properly executed by the indicated officers of PP&L.

This Certificate shall become void if it is not made effective within 10 days of service of the order by which it was published.

PUBLIC UTILITY COMMISSIONER

Charles Davis

PACIFIC POWER & LIGHT COMPANY

Senior Vice President

Secretary

June 7, 1976

APPENDIX "B"

APPEARANCES

Alvin Alexanderson
Assistant Attorney General
100 State Office Building
Salem, OR 97310
In behalf of the Public Utility Commissioner of Oregon

Richard D. Bach, Attorney
1400 Public Service Bldg.
920 SW 6th Ave.
Portland, OR 97204
In behalf of Pacific Power & Light Company

Bruce H. Anderson, Attorney
South Park Bldg.
101 E. Broadway, Suite 303
Eugene, OR 97401
In behalf of Tom Roster

Conley Ward, Jr.
Assistant Attorney General
476 W. Washington
Boise, Idaho
In behalf of State of Idaho

Don McKinnis
Oregon Dept. of Agriculture
Agriculture Building
635 Capitol NE
Salem, OR 97310
In behalf of Oregon Dept. of Agriculture

Paul W. Ebert
Oregon Dept. of Fish & Wildlife
1634 SW Alder St.
Portland, OR 97208
In behalf of Oregon Dept. of Fish & Wildlife

Richard M. Sandvick
Assistant Attorney General
1133 SW Market St.
Portland, OR 97201
In behalf of Oregon Dept. of Energy

Elizabeth Frenkel
1431 NW Vista Place
Corvallis, OR 97330
In behalf of Energy Coordinator Oregon Council Sierra Club

Senator Lenn Hannon
431 Litway
Ashland, OR 97520

Lynn Newbry
P. O. Box 550
Medford, OR 97501
In behalf of Medford Corp.

Gordon H. Dotson
2030 Antelope Rd.
White City, OR 97501
In behalf of White City Corp.

Robert L. Beardsley
2340 Taylor Way
Tacoma, WA 98466
In behalf of Reichhold Chemical, Inc.

Gene Hopkins
Box 3 Central
Medford, OR 97501
In behalf of Greater Medford Chamber of Commerce

Ray F. Mitchell
8000 Dead Indian Rd.
Ashland, OR 97520
In behalf of Oak Hills Ranch

Jack A. Hoffbuhr
219 N. Oakdale
Medford, OR 97501
In behalf of Greater Medford Chamber of Commerce

Dennis Hoffbuhr
1613 Meyers Lane
Medford, OR 97501
In behalf of Rogue River Water Users Assn.

Mrs. Otis Hill
5550 E. Antelope Rd.
Eagle Point, OR 97524

Mrs. Brita Hazell
804 Twin Pines Circle
Ashland, OR 97520

Julie Ann Hightower
1535 Baldy Crk. Rd.
Ashland, OR 97520
In behalf of Greensprings Community

Dan Hull
P. O. Box 864
Jacksonville, OR 97530

Lee Meek
2385 Table Rock Rd. #95
Medford, OR 97501
In behalf of International Union of Operating Engineers Local 701

Floyd Dill
630 W. Miner St.
Yreka, CA 96097

Lawson F. Inada
1447 E. Main
Ashland, OR 97520

William H. Couch
319 King St.
Medford, OR 97520
In behalf of Building Trades Council

Mel Hanlon
336 North St.
Yreka, CA 96097
In behalf of Chamber of Commerce of Yreka, CA

Milton Gorden
715 Pine St.
Central Point, OR 97501

Norman Nelson, Capt.
1100 Sweet Rd.
Medford, OR 97501
In behalf of International Assoc. of Fire Fighters Local

Laurie Shipley
419 Friendship
Ashland, OR 97520
In behalf of League of Women Voters of Ashland

Richard Werner
5286 Table Rock Rd.
Central Point, OR 97501
In behalf of Oregon Dept. of Fish & Wildlife

Mrs. Barbara Regan
3696 Princeton Way
Medford, OR 97501
In behalf of Rogue Valley League of Women Voters

Kathie Joy Elis
1650 Grand Ave.
Medford, OR 97501

Yale Sacks
691 Murphy Rd.
Medford, OR 97501

Dr. Wm. H. Roberts
521 S. Holly St.
Medford, OR 97501
In behalf of State Committee for Lower Rates

Charley Clayton
553 Glass Lane
Central Point, OR 97501

Carol P. Butterfield
1380 E. Main
Ashland, OR 97520

Monica Ellquist
355 "B" St.
Ashland, OR 97520

Hardin Smith
3758 Scenic Ave.
Central Point, OR 97501

Robert E. Murray
12366 E. Antelope Rd.
Eagle Point, OR 97524

John T. McMahan
P.O. Box 970
Grants Pass, OR 97526
In behalf of Grants Pass and Josephine County Chamber of Commerce

Kathy Ging
260 Laurel
Ashland, OR 97520

George Adkins
P.O. Box 12
Prospect, OR 97536

Joseph Garfas
1188 Tyler Creek Road
Ashland, OR 97520

Roger T. Ellquist
355 "B" St.
Ashland, OR 97520

William P. Meyer
1807 E. Main
Ashland, OR 97520

Bruce H. Bauer
767 S. Riverside
Medford, OR 97501

Henry & Kathryn Lanerie
3747 Hilsinger Rd.
Medford, OR 97501

Diane Meyer
P. O. Box 819
Ashland, OR 97520
In behalf of Sierra Club

Ogden Kellogg, Jr.
2132 Sardine Creek Rd.
Gold Hill, OR 97525
In behalf of Sardine Creek Natural History Society

Mary Cathryn Jones
P. O. Box 801
Ashland, OR 97520

Richard G. Montgomery
160 Church St.
Ashland, OR 97520

Eleanor L. Bradley
854 Twin Pines Circle
Ashland, OR 97520
In behalf of Oregon Environmental Council

Jim Miller
975 Dead Indian Rd.
Ashland, OR 97520

Keith L. Graves
360 Arnwood
Medford, OR 97501

Alma V. Williams
821 Twin Pines Circle
Ashland, OR 97520

Donna S. Widmer
176 Perrydale Ave.
Medford, OR 97501

Dale Balog
1380 Madrone
Ashland, OR 97520

James C. Nestler
P. O. Box 460
Medford, OR 97501
Jackson County Home Builders Assn.

Steve Carpenter
General Delivery
Jacksonville, OR 97520

Roy Cruz
1705 S. Columbus Ave.
Medford, OR 97501

Jonathon West
108 Vancouver Ave.
Medford, OR 97501

Hugh C. Bacon
15751 Hwy. 66
Ashland, OR 97520

J. D. Selleck
821 Twin Pines Circle
Ashland, OR 97520

Douglas Beauchamp
815 Wagon Trail
Jacksonville, OR 97530

Denton J. Pearson
416 Bridge St.
Ashland, OR 97520
In behalf of S.O.S.C.
Local Board O.S.P.I.R.G.

Kirk Matteson
418 Hamilton
Medford, OR 97501
In behalf of OSPIRG

Dave Doolen
3040 Shale City
Ashland, OR 97520

Elizabeth Bolster
183 E. Ashland Lane
Ashland, OR 97520

Dick Porn
10 Crater Lake Ave.
Medford, OR 97501
In behalf Oregon Dept.
of Economic Development

Mary Miner Fasel
P.O. Box 652
Medford, OR 97501

Donna S. Widmer
176 Perrydale
Medford, OR 97501
In behalf of Sierra Club

Gerald L. Green
14705 Hyw 66
Ashland, OR 97520

Stephen C. Bates
2425 London Circle
Medford, OR 97501

Theodore E. Thom
421 Damant
Klamath Falls, OR 97601

Charles Bridges
6611 Alva
Klamath Falls, OR 97601
In behalf of Oregon Fish &
Game Council

Alfred D. Collier
1401 Pacific Terrace
Klamath Falls, OR 97601

Charles A. Curtiss
Harriman Rt., Box 20
Klamath Falls, OR 97601
In behalf of Klamath County
Chamber of Commerce

Harold D. Gaylor
1529 SW 12th Ave.
Portland, OR 97201
In behalf of IUOE
Local 701 BA

David R. Hummel
Box 66A, Harriman Rt.
Klamath Falls, OR 97601

APPENDIX "B"
Page 2 of 8

Dayton O. Hyde
1410 Pacific Terrace
Klamath Falls, OR 97601

James M. Flowers
Box 95
Midland, OR 97634

Susan Jackabosky
P. O. Box 1226
Klamath Falls, OR 97601
In behalf of League of Women Voters of Klamath County

Gary W. Nichols
3001 Summers Lane
Klamath Falls, OR 97601
In behalf of Winema Chapter, Izaah Walton League of America

Mike O'Hair
1891 Euclid St.
Klamath Falls, OR 97601
In behalf of Ducks Unlimited for Klamath County

Nina Pence
219 Jefferson
Klamath Falls, OR 97601

Paul Robin
6160 Delaware
Klamath Falls, OR 97601

Kurt Schmidt
P. O. Box 257
Klamath Falls, OR 97601
In behalf of Modoc Lumber Co.

Raymond P. Thorne
Commissioner, Klamath County
2428 California Ave.
Klamath Falls, OR 97601

Bill Thomas
Rt. 1, Box 657W
Klamath Falls, OR 97601
In behalf of Pine Grove Builders

Vance Thomas
3345 Madison
Klamath Falls, OR 97601

John G. Ward
2043 Del Moro
Klamath Falls, OR 97601

Clarence Westlund
220 Main St.
Klamath Falls, OR 97601
In behalf of Building Trades Council and Southeastern Oregon Labor Council

Jean Crownover
458 Hillside
Klamath Falls, OR 97601

Tom Roster
5241 Bryant Ave.
Klamath Falls, OR 97601

Louisa Bateman
Commissioner, Fish & Wildlife
Harriman Route, Box 24
Klamath Falls, OR 97601

Andrew R. Gigler
4230 S. 6th St.
Klamath Falls, OR 97601
In behalf of Defenders of Wildlife of America and Friends of the Earth Foundation

Charles Funk
345 Nevada
Klamath Falls, OR 97601
In behalf of Sierra Club Klamath Group

Sara Duvall
1015 Loma Linda Dr.
Klamath Falls, OR 97601

Allen Bateman
Harriman Rt. #24
Klamath Falls, OR 97601

Richard L. Garbutt
2211 Main
Klamath Falls, OR 97601

Doris A. Johnson
1946 Manzanita
Klamath Falls, OR 97601

Regis Andrien
P. O. Box 32
Midland, OR 97634

David G. Zalunardo
2027 Herbert St.
Klamath Falls, OR 97601

Lynn E. Long
P. O. Box 543
Merrill, OR 97633

Margaret E. Wilder
2930 Miller Isl. Rd.
Klamath Falls, OR 97601

John W. Tritch
1233 Pacific Terrace
Klamath Falls, OR 97601
In behalf of Columbia Plywood Corp., Klamath Plywood Div.

Tim O. Hayden
1605 Ivory Street
Klamath Falls, OR 97601

Joel Jackabosky
4460 Bisbee
Klamath Falls, OR 97601

Lowell N. Jones
P. O. Box 1866
Klamath Falls, OR 97601

Senator Robert R. Smith
771 Ponderosa Village
Burns, OR 97720

Donald W. Hicks
Surprise Valley
Electrification Corp.
Alturas, CA 96101

Sam Hartley, County Commissioner
Malheur County Court
Route 2
Nyssa, OR 97913
In behalf of Malheur County Court

Elaine Barton
511 South St.
Lakeview, OR 97630

Leslie Shaw
Box 134
Lakeview, OR 97630
In behalf of Industrial Committee Lake County Chamber of Commerce

John E. McDonald
155 F St. South
Lakeview, OR 97630

Philip G. Simonski
232 S. "G" St.
Lakeview, OR 97630

Ken Boyer
P. O. Box 151
Lakeview, OR 97630
In behalf of Bureau of Land Management

Melvin Schlagel
P. O. Box 1247
Lakeview, OR 97630

Mary Abramson
Route, Box 126
Lakeview, OR 97630

E. L. McKinney
139 So. J
Lakeview, OR 97630

Forrest E. Cooper
444 So. E St.
Lakeview, OR 97630

Don Fitzgerald, Commissioner
Board of Commissioners
Court House
Lakeview, OR 97630
In behalf of Lake County Board of Commissioners

William H. Odezaard
Rt. 1, Box 14C
Lakeview, OR 97630
In behalf of Lalish TV, Inc.

Eldon McLaury
906 Millview
Lakeview, OR 97630

Rosemary Fitzgerald
713 So. F St.
Lakeview, OR 97630

Erwin Abramson
Rt. 6, Box 126
Lakeview, OR 97630

Roger F. Chase
130 So. K
Lakeview, OR 97630

Orval R. Layton
833 No. 8th
Lakeview, OR 97630

R. M. Johnson
816 So. H
Lakeview, OR 97630

Jeremiah O'Leary
Summer Lake, OR 97640

Chuck Kelley
P. O. Box 1310
Lakeview, OR 97630
In behalf of Lakeview Ag. Center, Inc.

Lloyd Seely
P. O. Box 230
Lakeview, OR 97630

Howard M. Queria
702 South E St.
Lakeview, OR 97630
In behalf of U.S. Forest Service

Mr. & Mrs. William E. Selby
Rt. 2, Box 64
Lakeview, OR 97630

Ed Avery
P. O. Box 711
Lakeview, OR 97630
In behalf of Louisiana-Pacific Corp.

Jerald R. Steward
636 South F
Lakeview, OR 97630

A. K. Majors
Box 1015
Lakeview, OR 97630

Roger Thorne
P. O. Box 543
Malin, OR 97632
In behalf of Stateline Sprayers

John Yarbrough
1712 Chinchalla
Klamath Falls, OR 97601

Steven L. Elefant
Oregon State University
Dept. of Fisheries & Wildlife
104 Nash Hall
Corvallis, OR 97331

Charles Bridges, President
Oregon Fish & Game Council
6611 Alva
Klamath Falls, OR 97601

SERVICE LIST

UF 3182

Alvin Alexanderson
Assistant Attorney General
100 State Office Building
Salem, OR 97310
In behalf of the Public Utility Commissioner of Oregon

Richard D. Bach, Attorney
1400 Public Service Bldg.
920 SW 6th Ave.
Portland, OR 97204
In behalf of Pacific Power & Light Company

Bruce H. Anderson, Attorney
South Park Bldg.
101 E. Broadway, Suite 303
Eugene, OR 97401
In behalf of Tom Roster

Conley Ward, Jr.
Assistant Attorney General
476 W. Washington
Boise, Idaho
In behalf of State of Idaho

Don McKinnis
Oregon Dept. of Agriculture
Agriculture Building
635 Capitol NE
Salem, OR 97310
In behalf of Oregon Dept. of Agriculture

Paul W. Ebert
Oregon Dept. of Fish & Wildlife
1634 SW Alder St.
Portland, OR 97208
In behalf of Oregon Dept. of Fish & Wildlife

Richard M. Sandvick
Assistant Attorney General
1133 SW Market St.
Portland, OR 97201
In behalf of Oregon Dept. of Energy

Elizabeth Frenkel
1431 NW Vista Place
Corvallis, OR 97330
In behalf of Energy Coordinator Oregon Council Sierra Club

Senator Lenn Hannon
431 Litway
Ashland, OR 97520

Lynn Newbry
P. O. Box 550
Medford, OR 97501
In behalf of Medford Corp.

Gordon H. Dotson
2030 Antelope Rd.
White City, OR 97501
In behalf of White City Corp.

Robert L. Beardsley
2340 Taylor Way
Tacoma, WA 98466
In behalf of Reichhold Chemical, Inc.

Gene Hopkins
Box 3 Central
Medford, OR 97501
In behalf of Greater Medford Chamber of Commerce

Ray F. Mitchell
8000 Dead Indian Rd.
Ashland, OR 97520
In behalf of Oak Hills Ranch

Jack A. Hoffbuhr
219 N. Oakdale
Medford, OR 97501
In behalf of Greater Medford Chamber of Commerce

Dennis Hoffbuhr
1613 Meyers Lane
Medford, OR 97501
In behalf of Rogue River Water Users Assn.

Warren Neumann
1985 Portland
Klamath Falls, OR 97601
In behalf of Neumann & Bennetts, Inc.

Jack Liskey
P. O. Box 467
Merrill, OR 97633

William H. Anklin
3711 Austin St.
Klamath Falls, OR 97601

Jack Faulkner
4400 Summers Lane
Klamath Falls, OR 97601

Ray Thorne, Commissioner
Klamath County
Klamath Falls, OR 97601

Paul Tschirky
Rt. 1, Box 212
Tulelake, CA 96134

Scott Warren
Rt. 3, Box 1230
Klamath Falls, OR 97601

John Kerns
Rt. 3, Box 339
Klamath Falls, OR 97601
In behalf of Klamath County Farm Bureau

Tom Bourgeois
P. O. Box 468
Lakeview, OR 97630

Robert C. Fields
Rt. 1, Box 74
Tulelake, CA 96134
In behalf of U.S. Fish & Wildlife Service

SERVICE LIST (Cont'd.)

UF 3182

Mrs. Otis Hill
5550 E. Antelope Rd.
Eagle Point, OR 97524

Mrs. Brita Hazell
804 Twin Pines Circle
Ashland, OR 97520

Julie Ann Hightower
1535 Baldy Crk. Rd.
Ashland, OR 97520
In behalf of Greensprings Community

Dan Hull
P. O. Box 864
Jacksonville, OR 97530

Lee Meek
2385 Table Rock Rd. #95
Medford, OR 97501
In behalf of International Union of Operating Engineers Local 701

Floyd Dill
630 W. Miner St.
Yreka, CA 96097

Lawson F. Inada
1447 E. Main
Ashland, OR 97520

William H. Couch
319 King St.
Medford, OR 97520
In behalf of Building Trades Council

Mel Hanlon
336 North St.
Yreka, CA 96097
In behalf of Chamber of Commerce of Yreka, CA

Milton Gorden
715 Pine St.
Central Point, OR 97501

Norman Nelson, Capt.
1100 Sweet Rd.
Medford, OR 97501
In behalf of International Assoc. of Fire Fighters Local

Laurie Shipley
419 Friendship
Ashland, OR 97520
In behalf of League of Women Voters of Ashland

Richard Werner
5286 Table Rock Rd.
Central Point, OR 97501
In behalf of Oregon Dept. of Fish & Wildlife

Mrs. Barbara Regan
3696 Princeton Way
Medford, OR 97501
In behalf of Rogue Valley League of Women Voters

Kathie Joy Elis
1650 Grand Ave.
Medford, OR 97501

Yale Sacks
691 Murphy Rd.
Medford, OR 97501

Dr. Wm. H. Roberts
521 S. Holly St.
Medford, OR 97501
In behalf of State Committee for Lower Rates

Charley Clayton
553 Glass Lane
Central Point, OR 97501

Carol P. Butterfield
1380 E. Main
Ashland, OR 97520

Monica Ellquist
355 "B" St.
Ashland, OR 97520

SERVICE LIST (Cont'd.)

UF 3182

Hardin Smith
3758 Scenic Ave.
Central Point, OR 97501

Robert E. Murray
12366 E. Antelope Rd.
Eagle Point, OR 97524

John T. McMahan
P.O. Box 970
Grants Pass, OR 97526
In behalf of Grants Pass and Josephine County Chamber of Commerce

Kathy Ging
260 Laurel
Ashland, OR 97520

George Adkins
P.O. Box 12
Prospect, OR 97536

Joseph Garfas
1188 Tyler Creek Road
Ashland, OR 97520

Roger T. Ellquist
355 "B" St.
Ashland, OR 97520

William P. Meyer
1807 E. Main
Ashland, OR 97520

Bruce H. Bauer
767 S. Riverside
Medford, OR 97501

Henry & Kathryn Lanerie
3747 Hilsinger Rd.
Medford, OR 97501

Diane Meyer
P. O. Box 819
Ashland, OR 97520
In behalf of Sierra Club

Ogden Kellogg, Jr.
2132 Sardine Creek Rd.
Gold Hill, OR 97525
In behalf of Sardine Creek Natural History Society

Mary Cathryn Jones
P. O. Box 801
Ashland, OR 97520

Richard G. Montgomery
160 Church St.
Ashland, OR 97520

Eleanor L. Bradley
854 Twin Pines Circle
Ashland, OR 97520
In behalf of Oregon Environmental Council

Jim Miller
975 Dead Indian Rd.
Ashland, OR 97520

Keith L. Graves
360 Arnwood
Medford, OR 97501

Alma V. Williams
821 Twin Pines Circle
Ashland, OR 97520

Donna S. Widmer
176 Perrydale Ave.
Medford, OR 97501

Dale Balog
1380 Madrone
Ashland, OR 97520

James C. Nestler
P. O. Box 460
Medford, OR 97501
Jackson County Home Builders Assn.

SERVICE LIST (Cont'd.)

UF 3182

Dayton O. Hyde
1410 Pacific Terrace
Klamath Falls, OR 97601

James M. Flowers
Box 95
Midland, OR 97634

Susan Jackabosky
P. O. Box 1226
Klamath Falls, OR 97601
In behalf of League of Women Voters of Klamath County

Gary W. Nichols
3001 Summers Lane
Klamath Falls, OR 97601
In behalf of Winema Chapter, Isaac Walton League of America

Mike O'Hair
1891 Euclid St.
Klamath Falls, OR 97601
In behalf of Ducks Unlimited for Klamath County

Nina Pence
219 Jefferson
Klamath Falls, OR 97601

Paul Robin
6160 Delaware
Klamath Falls, OR 97601

Kurt Schmidt
P. O. Box 257
Klamath Falls, OR 97601
In behalf of Modoc Lumber Co.

Raymond P. Thorne
Commissioner, Klamath County
2428 California Ave.
Klamath Falls, OR 97601

Bill Thomas
Rt. 1, Box 657W
Klamath Falls, OR 97601
In behalf of Pine Grove Builders

Lloyd Seely
P. O. Box 230
Lakeview, OR 97630

Howard M. Queria
702 South E St.
Lakeview, OR 97630
In behalf of U.S. Forest Service

Mr. & Mrs. William E. Selby
Rt. 2, Box 64
Lakeview, OR 97630

Ed Avery
P. O. Box 711
Lakeview, OR 97630
In behalf of Louisiana-Pacific Corp.

Jerald R. Steward
636 South F
Lakeview, OR 97630

A. K. Majors
Box 1015
Lakeview, OR 97630

Roger Thorne
P. O. Box 543
Malin, OR 97632
In behalf of Stateline Sprayers

John Yarbrough
1712 Chinchalla
Klamath Falls, OR 97601

Steven L. Elefant
Oregon State University
Dept. of Fisheries & Wildlife
104 Nash Hall
Corvallis, OR 97331

Charles Bridges, President
Oregon Fish & Game Council
6611 Alva
Klamath Falls, OR 97601

SERVICE LIST (Cont'd.)

UF 3182

Steve Carpenter
General Delivery
Jacksonville, OR 97520

Roy Cruz
1705 S. Columbus Ave.
Medford, OR 97501

Jonathon West
108 Vancouver Ave.
Medford, OR 97501

Hugh C. Bacon
15751 Hwy. 66
Ashland, OR 97520

J. D. Selleck
821 Twin Pines Circle
Ashland, OR 97520

Douglas Beauchamp
815 Wagon Trail
Jacksonville, OR 97530

Denton J. Pearson
416 Bridge St.
Ashland, OR 97520
In behalf of S.O.S.C.
Local Board O.S.P.I.R.G.

Kirk Matteson
418 Hamilton
Medford, OR 97501
In behalf of OSPIRG

Dave Doolen
3040 Shale City
Ashland, OR 97520

Elizabeth Bolster
183 E. Ashland Lane
Ashland, OR 97520

Dick Porn
10 Crater Lake Ave.
Medford, OR 97501
In behalf Oregon Dept.
of Economic Development

Mary Miner Fasel
P.O. Box 652
Medford, OR 97501

Donna S. Widmer
176 Perrydale
Medford, OR 97501
In behalf of Sierra Club

Gerald L. Green
14705 Hyw 66
Ashland, OR 97520

Stephen C. Bates
2425 London Circle
Medford, OR 97501

Theodore E. Thom
421 Damant
Klamath Falls, OR 97601

Charles Bridges
6611 Alva
Klamath Falls, OR 97601
In behalf of Oregon Fish &
Game Council

Alfred D. Collier
1401 Pacific Terrace
Klamath Falls, OR 97601

Charles A. Curtiss
Harriman Rt., Box 20
Klamath Falls, OR 97601
In behalf of Klamath County
Chamber of Commerce

Harold D. Gaylor
1529 SW 12th Ave.
Portland, OR 97201
In behalf of IUOE
Local 701 BA

David R. Hummel
Box 66A, Harriman Rt.
Klamath Falls, OR 97601

SERVICE LIST (Cont'd.)

Vance Thomas
3345 Madison
Klamath Falls, OR 97601

John G. Ward
2043 Del Moro
Klamath Falls, OR 97601

Clarence Westlund
220 Main St.
Klamath Falls, OR 97601
In behalf of Building Trades Council and Southeastern Oregon Labor Council

Jean Crownover
458 Hillside
Klamath Falls, OR 97601

Tom Roster
5241 Bryant Ave.
Klamath Falls, OR 97601

Louisa Bateman
Commissioner, Fish & Wildlife
Harriman Route, Box 24
Klamath Falls, OR 97601

Andrew R. Gigler
4230 S. 6th St.
Klamath Falls, OR 97601
In behalf of Defenders of Wildlife of America and Friends of the Earth Foundation

Charles Funk
345 Nevada
Klamath Falls, OR 97601
In behalf of Sierra Club Klamath Group

Sara Duvall
1015 Loma Linda Dr.
Klamath Falls, OR 97601

Allen Bateman
Harriman Rt. #24
Klamath Falls, OR 97601

Richard L. Garbutt
2211 Main
Klamath Falls, OR 97601

Doris A. Johnson
1946 Manzanita
Klamath Falls, OR 97601

Regis Andrieu
P. O. Box 32
Midland, OR 97634

David G. Zalunardo
2027 Herbert St.
Klamath Falls, OR 97601

Lynn E. Long
P. O. Box 543
Merrill, OR 97633

Margaret E. Wilder
2930 Miller Isl. Rd.
Klamath Falls, OR 97601

John W. Tritch
1233 Pacific Terrace
Klamath Falls, OR 97601
In behalf of Columbia Plywood Corp., Klamath Plywood Div.

Tim O. Hayden
1605 Ivory Street
Klamath Falls, OR 97601

Joel Jackabosky
4460 Bisbee
Klamath Falls, OR 97601

Lowell N. Jones
P. O. Box 1866
Klamath Falls, OR 97601

SERVICE LIST (Cont'd.)

UF 3182

Senator Robert R. Smith
771 Ponderosa Village
Burns, OR 97720

Donald W. Hicks
Surprise Valley
Electrification Corp.
Alturas, CA 96101

Sam Hartley, County Commissioner
Malheur County Court
Route 2
Nyssa, OR 97913
In behalf of Malheur County Court

Elaine Barton
511 South St.
Lakeview, OR 97630

Leslie Shaw
Box 134
Lakeview, OR 97630
In behalf of Industrial Committee Lake County Chamber of Commerce

John E. McDonald
155 F St. South
Lakeview, OR 97630

Philip G. Simonski
232 S. "G" St.
Lakeview, OR 97630

Ken Boyer
P. O. Box 151
Lakeview, OR 97630
In behalf of Bureau of Land Management

Melvin Schlagel
P. O. Box 1247
Lakeview, OR 97630

Mary Abramson
Route, Box 126
Lakeview, OR 97630

E. L. McKinney
139 So. J
Lakeview, OR 97630

Forrest E. Cooper
444 So. E St.
Lakeview, OR 97630

Don Fitzgerald, Commissioner
Board of Commissioners
Court House
Lakeview, OR 97630
In behalf of Lake County Board of Commissioners

William H. Odegaard
Rt. 1, Box 14C
Lakeview, OR 97630
In behalf of Lalish TV, Inc.

Eldon McLaury
906 Millview
Lakeview, OR 97630

Rosemary Fitzgerald
713 So. F St.
Lakeview, OR 97630

Erwin Abramson
Rt. 6, Box 126
Lakeview, OR 97630

Roger F. Chase
130 So. K
Lakeview, OR 97630

Orval R. Layton
833 No. 8th
Lakeview, OR 97630

R. M. Johnson
816 So. H
Lakeview, OR 97630

Jeremiah O'Leary
Summer Lake, OR 97640

Chuck Kelley
P. O. Box 1310
Lakeview, OR 97630
In behalf of Lakeview Ag. Center, Inc.

SERVICE LIST (Cont'd.)

Warren Neumann
1985 Portland
Klamath Falls, OR 97601
In behalf of Neumann & Bennetts, Inc.

Jack Liskey
P. O. Box 467
Merrill, OR 97633

William H. Anklin
3711 Austin St.
Klamath Falls, OR 97601

Jack Faulkner
4400 Summers Lane
Klamath Falls, OR 97601

Ray Thorne, Commissioner
Klamath County
Klamath Falls, OR 97601

Paul Tschirky
Rt. 1, Box 212
Tulelake, CA 96134

Scott Warren
Rt. 3, Box 1230
Klamath Falls, OR 97601

John Kerns
Rt. 3, Box 339
Klamath Falls, OR 97601
In behalf of Klamath County Farm Bureau

Tom Bourgeois
P. O. Box 468
Lakeview, OR 97630

Robert C. Fields
Rt. 1, Box 74
Tulelake, CA 96134
In behalf of U.S. Fish & Wildlife Service

Richard Forester
Legal Aid, Multnomah County
1100 Board of Trade Building
310 SW 4th
Portland, OR 97204

Lester Rookstool
Route 1, Box 570
Klamath Falls, Oregon 97601

W. S. Robinson
5749 Leland Drive
Klamath Falls, Oregon 97601

Alfred Collier
P.O. Box 428
Klamath Falls, Oregon 97601

Frederal Land Bank Association of Klamath Falls
900 Klamath Ave., Box 148
Klamath Falls, Oregon 97601

Phillip & Susan Cahoon
206 Gage Rd.
Klamath Falls, Oregon 97601

Klamath Basin Water Users
2062 Lavey St.
Klamath Falls, Oregon 97601

Troy Qualls
Route 1, Box 639
Klamath Falls, Oregon 97601

Curtis Nitschelm
5329 Bryant St.
Klamath Falls, Oregon 97601

Lew Warneking
212 Soquel St.
Klamath Falls, Oregon 97601

Edward E. Truax
902 West Oregon Avenue
Klamath Falls, Oregon 97601

Homer L. Barich
3216 Caroline St.
Klamath Falls, OR 97601

John C. Huntley
Oregon Institute of Technology
Klamath Falls, OR 97601

SERVICE LIST (Cont'd.)

Kenneth Altuttle
2680 - C Uhrmann
Klamath Falls, Oregon 97601

Robert P. Browne
2600 Patterson St.
Klamath Falls, Oregon 97601

Elizabeth Frankel
1431 NW Vista Place
Corvallis, Oregon 97330

Dorothy Phillips
5525 Belair Drive
Klamath Falls, Oregon 97601

KLAD
P.O. Box 960
Klamath Falls, Oregon 97601

Marin Alter
831 Hillside
Klamth Falls, Oregon 98601

Rookstool and Alter
2130 Arthur
Klamath Falls, Oregon 97601

Lloyd Gift
1302 E. Main St.
Klamath Falls, Oregon 97601

Bryant Williams
Route 1, Box 598A
Klamath Falls, Oregon 97601

Senator Fred W. Heard
212 High St.
Klamath Falls, Oregon 97601

RECEIVED
BUREAU OF
LAND MANAGEMENT
OCT 16 10 00 AM '75
STATE OFFICE
PORTLAND, OREGON

League of Women Voters of Klamath COUNTY

Klamath Falls, Oregon 97601
P.O. Box 1226

OCTOBER 13, 1976

BUREAU OF
MANAGEMENT
OCT 18 10 00 AM '76
STATE OFFICE
PORTLAND, OREGON

OREGON STATE DIRECTOR
BUREAU OF LAND MANAGEMENT
P.O. BOX 2965
PORTLAND, OREGON 97208

40

GENTLEMEN:

RE: ENVIRONMENTAL IMPACT STATEMENT DRAFT
PACIFIC POWER & LIGHT COMPANY 500 KV POWERLINE
MIDPOINT, IDAHO - MEDFORD, OREGON

THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS, ACTING UNDER OREGON LEAGUE OF WOMEN VOTERS LAND USE POSITION, WISH TO SUBMIT THE ATTACHED COMMENTARY ON THE EIS DRAFT.

THE STATEMENT OF OUR LAND USE POSITION IS:

"THE LEAGUE OF WOMEN VOTERS OF OREGON SUPPORTS POLICIES WHICH PROMOTE BOTH CONSERVATION AND PHASED DEVELOPMENT OF LAND AS A NATURAL RESOURCE."

UNDER THIS LAND USE POSITION, THE LEAGUE OF WOMEN VOTERS OF OREGON SUPPORTED SENATE BILL 100, PASSED BY THE OREGON STATE LEGISLATURE IN 1973, AND THE LAND CONSERVATION AND DEVELOPMENT COMMISSION STATEWIDE PLANNING GOALS AND GUIDELINES, WHICH ARE A PART OF OUR LAND USE LAW EFFECTIVE JANUARY 1, 1975.

WE WILL APPRECIATE THE BUREAU OF LAND MANAGEMENT GIVING SERIOUS CONSIDERATION TO THE ATTACHED COMMENTS WHEN PREPARING THE FINAL EIS, AS KLAMATH COUNTY LEAGUE OF WOMEN VOTERS ARE CONCERNED THAT OREGON'S LAND USE LAW HAS NOT BEEN USED OR FOLLOWED FOR THE COUNTIES THE PROPOSED LINE WILL CROSS IN OUR STATE, AND IN PARTICULAR IN KLAMATH COUNTY. WE WOULD LIKE TO GO ON RECORD AS PROTESTING THE PUBLIC HEARING TIME ON THE EIS DRAFT IN KLAMATH FALLS, AS THE DAYTIME HEARING, BEGINNING AT 9:30 A.M. CERTAINLY ELIMINATED MANY INTERESTED PEOPLE FROM TESTIFYING AT THE HEARING DUE TO WORKING HOURS, ETC. WE SUGGEST, AS A CONSEQUENCE OF THE TIME OF THE HEARING, A GOOD CROSS-SECTION OF INPUT FROM THE PUBLIC WAS NOT ACQUIRED, AS ONLY FARMERS, RETIRED PEOPLE, ETC. WERE THERE.

SINCERELY YOURS,

KLAMATH COUNTY LEAGUE OF WOMEN VOTERS
JOAN BALIN, PRESIDENT

Margaret Wilder

PRESENTED BY: MARGARET WILDER, CO-CHAIRMAN
NATURAL RESOURCE COMMITTEE
LAND USE

IN THE MATTER OF

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

PACIFIC POWER AND LIGHT

PROPOSED 500 KV POWERLINE

MIDPOINT, IDAHO- MEDFORD, OREGON

KLAMATH COUNTY LEAGUE OF WOMEN VOTERS
JOAN BALIN, PRESIDENT

MARGARET WILDER, CO CHAIRMAN
NATURAL RESOURCE COMMITTEE
LAND USE

THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS THROUGH THEIR NATURAL RESOURCE COMMITTEE IS CONCERNED THAT THE DRAFT OF THE ENVIRONMENTAL IMPACT STATEMENT OF THE PROPOSED 500 KV POWERLINE OF PACIFIC POWER AND LIGHT COMPANY FROM MIDPOINT, IDAHO TO MEDFORD, OREGON AS PREPARED BY THE BUREAU OF LAND MANAGEMENT DOES NOT CONSIDER THE LONG-TERM EFFECTS OF THE IMPACT OF ESTABLISHMENT OF A POSSIBLE ENERGY CORRIDOR ALONG THE PROPOSED ROUTE, AND ALTERNATE ROUTES #1 AND #2; NOR DOES IT DEAL ADEQUATELY WITH THE ENVIRONMENTAL IMPACT IN LAND USE PLANNING ON A LONG-TERM BASIS RELATING TO WATER RESOURCES, VEGETATION, WILDLIFE, ARCHAEOLOGICAL AND HISTORICAL SITES, ESTHETICS AND RECREATION RESOURCES, AS WELL A SOCIOECOMOMIC CONDITIONS.

SENATE BILL 100, THE LAND USE LAW IN THE STATE OF OREGON IS NOT ADEQUATELY ADDRESSED IN THE EIS. UNDER THE LAND USE POSITION OF THE LEAGUE OF WOMEN VOTERS OF OREGON, AS QUOTED IN OUR COVER LETTER, KLAMATH COUNTY LEAGUE OF WOMEN VOTERS WISHES TO CALL ATTENTION TO OREGON'S LAND USE PLANNING LAW, AND THE FOURTEEN GOALS AND GUIDELINES WHICH ARE A PART OF THAT LAW. GOAL 1 IS CITIZEN INVOLVEMENT IN PLANNING: WHICH STATES: "FEDERAL, STATE AND REGIONAL AGENCIES AND SPECIAL PURPOSE DISTRICTS SHALL COORDINATE THEIR PLANNING EFFORTS WITH AFFECTED GOVERNING BODIES AND MAKE USE OF EXISTING LOCAL CITIZEN INVOLVEMENT PROGRAM ESTABLISHED BY CITIES AND COUNTIES." KLAMATH COUNTY CITIZEN INVOLVEMENT PROGRAM DOES HAVE SOME AREA COMMITTEES OPERATING IN SOME AREAS WHICH THE LINE CROSSES, SPECIFICALLY THAT AREA WHERE THE PROPOSED ROUTE IS ONE MILE NORTH OF THE LOWER KLAMATH LAKE REFUGE, AND ONE MILE NORTH OF WORDEN. BLM HAS NOT FULFILLED GOAL 1 OF OREGON'S LAND USE LAW.

GOAL 2: LAND USE PLANNING: STATES: CITY, COUNTY, STATE, AND FEDERAL AGENCY AND SPECIAL DISTRICT PLANS AND ACTIONS RELATED TO LAND USE SHALL BE GONSISTENT WITH THE COMPREHENSIVE PLANS OF CITIES AND COUNTIES. . ." KLAMATH COUNTY IS IN THE PROCESS OF EVALUATING ITS PRESENT LAND USE PLAN WITH CITIZEN INVOLVEMENT, TO UP-DATE IT TO OREGON'S LAND USE LAW. IN THE INTERIM, WE ARE TRYING TO FUNCTION UNDER THE KLAMATH COUNTY LAND USE PLAN AS A LEGAL DOCUMENT, AS WELL AS MAKING

AN ATTEMPT TO FOLLOW THE GOALS AND GUIDELINES OF OREGON'S LAW. HAS THE BLM CONSULTED WITH THE KLAMATH COUNTY PLANNING DEPARTMENT AS TO THE CONSISTENT PLANS OF THE PROPOSED ROUTE, AND ALTERNATE ROUTES, IN RELATION TO KLAMATH COUNTY PLANNING?

GOAL 3: AGRICULTURAL LANDS: "TO PRESERVE AND MAINTAIN AGRICULTURAL LANDS. AGRICULTURAL LANDS SHALL BE PRESERVED AND MAINTAINED FOR FARM USE, CONSISTENT WITH EXISTING AND FUTURE NEEDS FOR AGRICULTURAL PRODUCTS, FOREST AND OPEN SPACE. . . .. (1) ENVIRONMENTAL, ENERGY, SOCIAL, AND ECONOMIC CONSEQUENCES. (AND)(3) UNAVAILABILITY OF AN ALTERNATIVE SUITABLE LOCATION FOR THE REQUESTED USE. ." UNDER GUIDELINES OF THIS GOAL, SECTION B. IMPLEMENTATION, ITEM 3 STATES: "SERVICES THAT NEED TO PASS THROUGH AGRICULTURAL LANDS SHOULD NOT BE CONNECTED WITH ANY USE THAT IS NOT ALLOWED UNDER ORS 215.203 AND 215.213 SHOULD NOT BE ASSESSED AS PART OF THE FARM UNIT AND SHOULD BE LIMITED IN CAPACITY TO SERVE SPECIFIC SERVICE AREAS AND IDENTIFIED NEEDS.

THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS DOES NOT THINK THE EIS DRAFT ADDRESSES GOAL THREE ADEQUATELY IN THAT INVESTIGATION OF ALTERNATE ROUTES HAS NOT BEEN COMPLETE (THE STATEMENT SAYS ONLY ALTERNATE ROUTES #1 AND #2 WERE SURVEYED BY AERIAL FLIGHT); THAT CONSIDERATION OF ANY OTHER ROUTE ALTERNATE THAN THOSE PROPOSED BY PACIFIC POWER AND LIGHT HAS NOT BEEN ADDRESSED; THAT GUIDELINES FOR SERVICES LIMITED IN CAPACITY TO SERVE SPECIFIC AREAS AND IDENTIFIED NEEDS HAS BEEN DETAILED VERY VAGUELY IN THAT THE AREA DESIGNATED IS NOT [redacted] DETAILED FOR KLAMATH COUNTY, BUT FOR THE ENTIRE SOUTHWESTERN DIVISION OF PACIFIC POWER & LIGHT; THAT SPECIFICS OF DETAIL ARE GIVEN ONLY FOR JACKSON AND JOSEPHINE COUNTY; AND THAT IN CHAPTER II, PAGE 96 THE STATEMENT [redacted] "KLAMATH COUNTY IS MORE CLOSELY ALLIED TO COASTAL OREGON COUNTIES THAN OTHER SOUTHEASTERN COUNTIES" IS A QUESTIONABLE APPLICATION OF NEED FOR POWER, AND SHOULD NOT BE USED AS A JUSTIFICATION TO USE ONLY JACKSON & JOSEPHINE COUNTIES STATISTICS IN THE TABLES AS A BASE FOR GROWTH AND ECONOMIC EXPANSION.

SPECIFICS FOR KLAMATH COUNTY SHOULD BE USED. HOW MUCH POWER DOES KLAMATH COUNTY NEED UNTIL THE YEAR 1990? HOW MUCH ELECTRICITY WILL KLAMATH COUNTY RECEIVE FROM THE 500 KV LINE AS PROPOSED? WHAT ARE THE TRADE-OFFS IN KLAMATH COUNTY IF THE LINE IS BUILT? ARE WE LOSING MORE THAN WE WOULD GAIN? IN A MEETING HELD BY THE BUREAU OF RECLAMATION, KLAMATH PROJECT, ON DECEMBER 10, 1976, A MEMBER OF OUR KLAMATH COUNTY LEAGUE OF WOMEN VOTER'S NOTES TELLS US THAT PACIFIC POWER AND LIGHT TOLD THAT GROUP (WHICH WAS A CITIZEN'S ADVISORY COMMITTEE RELATING TO IRRIGATION WATER) THAT THE PROPOSED LINE WAS NOT THE FIRST NOR THE LAST 500 KV LINE THEY WOULD BUILD. THEY ALSO MENTIONED THAT FUTURE PLANS MIGHT INCLUDE PHASING OUT ONE OF THE KLAMATH BASIN 230 KV LINES PRESENTLY IN EXISTENCE. THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS THINKS A LONG-TERM PLAN FROM PACIFIC POWER & LIGHT SHOULD BE MADE AVAILABLE TO THE PUBLIC, SO THEY COULD WEIGH THE TRADE-OFFS INVOLVED IN KLAMATH COUNTY, BEFORE ANY ROUTE IS APPROVED.

GOAL 4: FOREST LANDS "TO CONSERVE FOREST LANDS FOR FOREST USE." DEFINITION: "FOREST LANDS--ARE (1) LANDS COMPOSED OF EXISTING AND POTENTIAL FOREST LANDS WHICH ARE SUITABLE FOR FOREST USES; (2) OTHER FORESTED LANDS NEEDED FOR WATERSHED PROTECTION, WILDLIFE AND FISHERIES HABITAT, AND RECREATION;. . . (4) OTHER FORESTED LANDS IN URBAN AND AGRICULTURAL AREAS WHICH PROVIDE URBAN BUFFERS, WIND BREAKS, WILDLIFE AND SCENIC CORRIDORS, AND RECREATIONAL USE." FOREST USES -- "ARE (2) OPEN SPACE, BUFFERS FROM NOISE, AND VISUAL SEPARATION OF CONFLICTING USES; (3) WATERSHED PROTECTION AND WILDLIFE AND FISHERIES HABITAT; (4) SOIL PROTECTION FROM WIND AND WATER; (5) MAINTENANCE OF CLEAN AIR AND WATER; (6) OUTDOOR RECREATIONAL ACTIVITIES AND RELATED SUPPORT SERVICES AND WILDERNESS VALUES COMPATIBLE WITH THESE USES; AND (7) GRAZING LAND FOR LIVESTOCK." GUIDELINES UNDER THIS GOAL FOR PLANNING STATE:" 7. MAXIMUM UTILIZATION OF UTILITY RIGHTS-OF WAY SHOULD BE REQUIRED BEFORE PERMITTING NEW ONES."

THE EIS DRAFT DOES NOT ADEQUATELY ADDRESS GOAL 4 OF OREGON'S LAND USE LAW IN THE OREGON COUNTIES WHICH IT CROSSES. CHAPTER V, UNAVOIDABLE ADVERSE IMPACTS, AND CHAPTER VI, RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY, ALTHOUGH INADEQUATELY ADDRESSED, SHOWS

VIOLATION OF GOAL 4, FOREST LANDS, AS THERE WILL BE LOSS OF SOIL THROUGH EROSION, SEDIMENTATION OF WATERWAYS, LOSS OF WATERSHED PROTECTION, LOSS OF WILDLIFE AND FISHERIES HABITAT, AND UNDERSIRABLE VISUAL IMPACT ON RECREATIONAL USE AND SCENIC CORRIDORS. THERE HAS BEEN LITTLE ATTEMPT FOR MAXIMUM UTILIZATION OF UTILITY RIGHTS-OF-WAYS PRESENTED BEFORE THE NEW PROPOSED ROUTE, MOST OF WHICH INVOLVES A NEW RIGHT-OF-WAY, IS APPROVED. THE NORTHWEST GRID OF POWER LINES AND PROPOSED POWER LINES FOR INTERCHANGE OF ELECTRICITY DURING PEAK GENERATING PERIODS IS VERY EXTENSIVE. IN STUDYING THE GRID, IT IS DIFFICULT TO TIE IN THE PROPOSED 500 KV TRANSMISSION LINE OF PP&L WITH THE EXCHANGE. NOTE EXHIBIT "A" ATTACHED OF THE POTENTIAL OF ANOTHER DC LINE INTERTIE WITH SOUTHWEST UTILITIES FROM BONNEVILLE POWER ADMINISTRATION. THE PROPOSED 500 KV PP&L LINE CROSSES ONE 750 KV LINE ALREADY CONNECTING BPA TO THE SOUTHWEST. THE EXPLORATION OF USING BPA POWER IN THE SOUTHWESTERN AND EASTERN OREGON AND NORTHERN CALIFORNIA AREA, AND CHANNELING PP&L'S JIM BRIDGER PLANT ELECTRICITY TO THE SOUTHWEST THROUGH SALE TO BPA (OR EXCHANGE) APPARENTLY HAS NEVER BEEN ADDRESSED. UP-GRADING OF EXISTING PP&L LINES (THE 230 KV LINES) MIGHT MAKE THIS A POSSIBILITY, AT A MUCH LESSER COST, CONSIDERING THE FACT THAT WYOMING IS MUCH CLOSER TO THE SOUTHWEST THAN THE COLUMBIA RIVER. THE USE OF EXISTING POWER LINES AND UTILITY RIGHTS-OF-WAY SHOULD CERTAINLY BE ADDRESSED AND STUDIED BEFORE THE FINAL EIS IS PUBLISHED.

GOAL 5: OPEN SPACES, SCENIC, AND HISTORIC AREAS, AND NATURAL RESOURCES: "TO CONSERVE OPEN SPACE AND PROTECT NATURAL AND SCENIC RESOURCES." THIS GOAL IN OREGON'S LAND USE PLANNING IS SO IMPORTANT, WE ARE ATTACHING IT AS EXHIBIT "B". THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS FEELS THAT THE EIS DRAFT HAS ONLY 'BRUSHED THE SURFACE' OF THE IMPACT THE PROPOSED LINE WOULD HAVE WITH THE ROUTE RECOMMENDED. CHAPTER VI, PAGE 8, SUMS UP THE IMPACT, WHICH UNFORTUNATELY IS NOT CLARIFIED IN OTHER PORTIONS OF THE STATEMENT IN DETAIL. WE QUOTE: "IT APPEARS THAT PROVISION OF ADDITIONAL POWER TO THE MARKET AREA WOULD BE BENEFICIAL IN THE NEAR TERM AND COULD BE ADVERSE IN THE LONG-TERM. PORTIONS OF SOUTHWESTERN IDAHO AND SOUTHEASTERN OREGON ARE IN A RELATIVELY UNDEVELOPED AND NATURAL STATE AND

THEREFORE HAVE UNIQUE SOCIAL VALUES. THE HIGH DESERT IS UNIQUE, ESSENTIALLY UNSETTLED AND REMOTE FROM MAJOR POPULATION CENTERS. CONSTRUCTION OF THE PROPOSED PROJECT COULD INTRODUCE SOME ENVIRONMENTAL DECAY AND A DECREASE IN THE UNIQUE VALUE OF THE AREA. AS THE NATION CONTINUES TO GROW, THE AMOUNT OF LAND IN A RELATIVELY UNDEVELOP STATE DECLINES. SCARCITY AND UTILITY CREATE VALUE, AS SOMETHING BECOMES MORE AND MORE SCARCE, VALUE INCREASES. CONSTRUCTION OF THE POWER LINE WOULD DECREASE THE PRESENT AND LONG-TERM SOCIAL VALUE OF A REALTIVELY LARGE LAND AREA." OREGON'S GOAL FIVE, PROVIDES THAT OREGON'S LONG-TERM LAND USE PLANNING PRESERVE THIS UNIQUE AREA OF OPEN SPACE, WILDLIFE HABITAT, FRAGILE DESERT AREAS, WILDERNESS AREAS, RECREATION TRAILS, PUBLIC USE OF HUNTING AREAS, OUTSTANDING SCENIC VIEW AND SITES. TO ESTABLISH AN 'ENERGY CORRIDOR' AS THE EIS DESCRIBES THROUGH SUCH AN AREA IS IN DIRECT CONFLICT WITH OREGON'S GOAL 5. THE EIS DOES NOT ADEQUATELY ADDRESS THE LONG-TERM IMPACTS THAT SUCH A CORRIDOR WOULD ESTABLISH. ATTACHED AS EXHIBIT "C" IS AN ARTICLE FROM KLAMATH FALLS HERALD & NEWS OF 10/7/76 REGARDING THE NATIONAL "DESERT TRAIL" (SEE CHAPTER 2, PAGE 191 OF EIS) WHICH IS WELL ON ITS WAY TO ESTABLISHMENT BY CONGRESS. THE PROPOSED ROUTE CROSSES THIS TRAIL, AS WELL AS THE PACIFIC CREST TRAIL. THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS PROPOSES THAT THE FINAL ENVIRONMENTAL IMPACT STATEMENT ON THE PROPOSED 500 KV TRANSMISSION LINE COMPLY WITH GOAL 5 OF OREGON'S LAND USE GOALS, AND PROVIDE A LONG-RANGE PLAN CONSISTENT WITH THIS GOAL, LISTING THE IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES AND THE LOSS OF SUCH RESOURCES BASED ON THE ASSUMPTION AN ENERGY CORRIDOR WOULD BE ESTABLISHED.

GOAL 8: <u>RECREATIONAL NEEDS</u>: "TO SATISFY THE RECREATIONAL NEEDS OF THE CITIZENS OF THE STATE AND VISITORS." THE PROPOSED ROUTE WOULD ELIMINATE AND DECREASE MANY OF THE RECREATIONAL USES OF THE PROPOSED AREA. THE EIS SHOULD STRESS THE POTENTIAL LOSS OF WILDLIFE THROUGH HARRASSMENT OF OFF-ROAD VEHICLES, ETC., BY THE OPENING UP OF THE AREA SO UNIQUE TO OUR STATE. WHILE THIS SUBJECT IS DEALT WITH IN THE DRAFT, ENOUGH EMPHASIS HAS NOT BEEN PLACED ON THIS IRRETRIEVABLE LOSS.

GOAL 9: ECONOMY OF THE STATE: "TO DIVERSIFY AND IMPROVE THE ECONOMY OF THE STATE." THE EIS DRAFT PRESENTS A PICTURE OF ECONOMY IN KLAMATH COUNTY OF 1. FORESTRY, 2. AGRICULTURE, 3. TOURISM, IN THAT ORDER. THE FINAL DRAFT SHOULD BE MORE SPECIFIC IN OUTLINING THE IMPACT THE PROPOSED ROUTE WOULD HAVE. ATTACHED AS EXHIBIT "D" IS KLAMATH FALLS HERALD & NEWS STORY OF WEDNESDAY, 9/15/76, OUTLINING THE ECONOMIC PRIORITIES SET FOR KLAMATH COUNTY BY THE KLAMATH COUNTY ECONOMIC AND DEVELOPMENT ASSOCIATION. (KCEDA) EARLIER INFORMATION FROM KCEDA ON SUPPORTING AND INCREASING INDUSTRY IN KLAMATH COUNTY IS FOR "NON-POLLUTANT" INDUSTRY, STRESSING THE USE OF OUR COUNTY'S GEO-THERMAL RESOURCES IN DEVELOPMENT OF AGRI-BUSINESS, AND RELATED BUSINESSES OF FORESTRY (SUCH AS SEED PLANTATIONS OF FOREST NURSERIES, ETC.) THESE BUSINESSES USE VERY LITTLE ELECTRICITY, AS THE USE WOULD BE FROM GEO-THERMAL WATER. NOTE "KCEDA" HAS DEVELOPED 17 GREENHOUSE PROSPECTS. . ." THE GREENHOUSE PROSPECTS WOULD BE USEING GEOTHERMAL WATER, NOT ELECTRICITY. VERY LITTLE IS SAID IN THE EIS DRAFT ABOUT THE POTENTIAL LOSS OF THE MIGRATORY WILDLIFE HUNTING INDUSTRY - THE POTENTIAL LOSS OF THE DEER HUNTING INDUSTRY - THE UPLAND GAME BIRD INDUSTRY - AS TO KLAMATH COUNTY, THESE ARE IMPORTANT ECONOMIC CONTRIBUTIONS, AND IN TRUTH ARE INDUSTRIES. THE POTENTIAL LOSS OF OUR THIRD MOST IMPORTANT ECONOMIC CONTRIBUTOR IN KLAMATH COUNTY IS NOT EVEN MENTIONED -- THAT OF TOURISM, AS TOURISM INCLUDES 'BIRD WATCHING' AND THE WILDLIFE REFUGES, AND LOSS OF BIRDS, OR CHANGE OF MIGRATORY FLIGHT PATTERNS WOULD DECREASE THAT INDUSTRY. THE EIS DOES NOT ADEQUATELY ADDRESS GOAL 9 OF OUR LAND USE PLANNING LAWS.

GOAL 13: ENERGY CONSERVATION "TO CONSERVE ENERGY."

THE DRAFT ADDRESSES THIS SUBJECT IN THE "ALTERNATIVES TO THE LINE". IT DOES NOT ADEQUATELY DETAIL THE USE OF GEOTHERMAL RESOURCE IN KLAMATH COUNTY IN LIEU OF THE USE OF ELECTRICITY. THE USE OF GEOTHERMAL SPACE HEATING IN KLAMATH COUNTY DATES BACK TO THE EARLY 1900'S. ONE CREAMERY IN OUR COUNTY PROCESSES ITS MILK WITH GEOTHERMAL RESOURCES. OREGON INSTITUTE OF TECHNOLOGY AND ITS GEO-UTILIZATION HEAT CENTER, IS CURRENTLY WORKING UNDER A GRANT (1976) TO DEVELOP GEOTHERMAL RESOURCES FOR AGRI-BUSINESS; THERE IS A EXPERIMENTAL GEO-THERMAL GREENHOUSE CURRENTLY AT THE COLLEGE; AS WELL AS EXPERIMENTS IN RAISING SHRIMP AND OTHER

COMMERCIAL FOOD FISH, USING GEOTHERMAL HEATED TANKS. THE EIS FINAL DRAFT SHOULD INCLUDE THIS VERY IMPORTANT POTENTIAL NON-ELECTRIC RESOURCE OF KLAMATH COUNTY. THERE HAS BEEN ONE ATTEMPT OF DEPTH DRILLING FOR GEO-THERMAL STEAM FOR ELECTRICITY GENERATION. ALSO, ENERGY SOURCES SUCH AS THE ALASKA OIL PIPELINE AND THE PROPOSED PACIFIC GAS TRANSMISSION LINE, BRINGING ADDITIONAL POWER TO THE PACIFIC NORTHWEST AND TO THE PP&L SERVICE AREA ARE NOT EVEN MENTIONED IN THE EIS DRAFT. (SEE 2/22/76 KLAMATH FALLS HERALD AND NEWS AFTICLE REGARDING THE (EXHIBIT "E") PACIFIC GAS TRANSMISSION LINE). ALL THE POTENTIAL ENERGY SOURCES MENTIONED HERE SHOULD BE INCLUDED IN THE EIS FINAL DRAFT.

THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS MAINTAINS THAT THE BUREAU OF LAND MANAGEMENT HAS MORE OR LESS USED PACIFIC POWER AND LIGHTS FIGURES, STATISTICS, AND EIS, IN MUCH OF ITS DRAFT; THAT SUITABLE ALTERNATIVE ROUTES OTHER THAN THOSE PROPOSED BY PP&L HAVE NOT BEEN INVESTIGATED; THAT SUITABLE ALTERNATIVES HAVE BEEN DEFICIENT, (I.E. CHAPTER VIII- 235 "HOWEVER, IT MAY BE POSSIBLE TO UPGRADE AND/OR REPLACE EXISTING TRANSMISSIONS CAPABILITY. THIS ALTERNATIVE WOULD VIRTUALLY ELIMINATE THE MAJORITY OF ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE APPLICANT'S PROPOSED MIDPOINT TO MEDFORD 500 KV LINE.") THAT THE EIS DRAFT HAS FAILED TO SHOW POSSIBLE TIE-IN'S TO BPA POWER OR THE NORTHWEST GRID SYSTEM; THAT THE EIS HAS FAILED TO SHOW AN ALTERNATIVE OF FEEDING THE POWER FROM THE NORTH THROUGH EXISTING LINES TO WHERE THE NEED IS POTENTIALLY THE GREATEST--THE WEST SIDE OF THE CASCADES; THAT THE EIS HAS NOT SUFFICIENTLY EMPHASIZED THE IMPACT ON WILDLIFE AND THE MIGRATORY WILDFOWL IN THE KLAMATH BASIN, BOTH FROM THE ENVIRONMENTAL AND ECONOMIC STANDPOINT (ROBERT FIELDS, MANAGER OF ALL U.S. WILDLIFE REFUGES IN THE KLAMATH BASIN TESTIFIED AT THE PUC PUBLIC HEARING THAT ANY 500-KV LINE BUILT IN THE AREA FROM THE HIGHWAY 97 SOUTH BRIDGE OF THE KLAMATH RIVER TO THE CALIFORNIA BORDER WOULD HAVE ESSENTIALLY THE SAME ADVERSE IMPACT ON THE MIGRATORY WILDFOWL AS THE PROPOSED ROUTE ONE MILE NORTH OF THE LOWER KLAMATH LAKE REFUGE).; THE EIS HAS NOT MENTIONED THAT THE LOWER KLAMATH LAKE REFUGE IS A NATIONAL HISTORIC SITE, BEING THE FIRST WILDLIFE REFUGE ESTABLISHED BY THE UNITES STATES.

THE EIS DRAFT HAS NOT COMPLIED AND COORDINATED WITH OREGON'S LAND USE LAW, AS DETAILED IN THIS COMMENTARY. OREGON'S LAND USE LAW PROVIDES FOR LAND USE PLANNING ON ALL SUBJECTS ADDRESSED IN THE DRAFT, THUS CREATING A COORDINATED EFFORT TO THE BEST AND HIGHEST USE OF THE LAND WITHIN THE CARRYING CAPACITY OF AIR, WATER, AND RESOURCES, TO PREVENT DEPLETION OF RENEWABLE RESOURCES ON A LONG-TERM BASIS.

CHAPTER II, "PROBABLE FUTRE ENVIRONMENT WITHOUT THE PROPOSED PROJECT" PAGES 226 AND 227, INDICATE THAT NONE OF THE 12 COUNTIES BY WHICH THE PROPOSED LINE WOULD CROSS WOULD RECEIVE ANY OF THE ELECTRIC POWER CARRIED BY THE 500 KV POWERLINE EXCEPT JACKSON COUNTY. BUT IT ALSO STATES "THE AVAILABILITY OF THE ELECTRIC POWER, OR THE LACK OF IT, CONCERNING THE PROPOSED FACTOR WOULD NOT APPEAR A FACTOR INFLUENCING THE FUTURE ENVIRONMENT IN THE 12 COUNTIES DESCRIBED IN THIS CHAPTER, EXCEPT JACKSON COUNTY.. . . . THE ECONOMIC AND SOCIAL TRENDS EVIDENT IN THE SEVEN IDAHO COUNTIES AND FOUR OREGON COUNTIES WOULD BE EXPECTED TO CONTINUE EVEN IF THE PROPOSED POWERLINE WOULD NOT BE CONSTRUCTED.. . . . THE STRUCTURE AND RELATIVE IMPORTANCE OF INDUSTRIES FOR THESE 11 COUNTIES IS NOT EXPECTED TO CHANGE SIGNIFICANTLY. . ." / APPARENTLY, THIS IS AN OPINIONATED STATEMENT-- NO FACTS HAVE BEEN GATHERED FROM THE PUBLIC ON THE GOALS FOR GROWTH IN KLAMATH COUNTY. PERHAPS THE PEOPLE WANT TO RETAIN A PLANNED GROWTH, KEEPING THEIR AGRICULTURE, TIMBER AND OTHER NATURAL RESOURCES AS THEIR PRESENT ECONOMIC STRUCTURE. THE AMENITIES OF THE AREA ARE BASED UPON THE NATURAL RESOURCES, THE QUALITY OF LIVING IN KLAMATH COUNTY IS BASED UPON NATURAL RESOURCES, AND NOT UPON POTENTIAL INDUSTRIALIZATION THAT REQUIRES LARGE AMOUNTS OF ELECTRICITY. IT IS SUGGESTED THAT THIS CHAPTER BE LOOKED AT CLOSELY FOR 'OPINIONS' NOT FACTS, WHEN THE FINAL STATEMENT IS PREPARED.

THE KLAMATH COUNTY LEAGUE OF WOMEN VOTERS SINCERELY HOPES THAT THE BUREAU OF LAND MANAGEMENT WILL CONSIDER THE SUGGESTIONS MADE IN THIS COMMENTARY ON THE EIS DRAFT WHEN MAKING UP THE FINAL ENVIRONMENTAL IMPACT STATEMENT, ALL COMMENTS ARE MADE WITH THE CONCERN THAT A GOOD LONG-RANGE LAND USE PLAN IN COORDINATION WITH OREGON'S LAW IS NOT ADEQUATELY ADDRESSED IN THE DRAFT ON KLAM TH
County's Portion of the Route.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION

~~PACIFIC~~ NORTHWEST REGION
~~1000 SECOND AVENUE~~
~~SEATTLE, WASHINGTON 98104~~
915 SECOND AVENUE, RM. 990
SEATTLE, WASHINGTON 98174

IN REPLY REFER TO:

E3035
DES-76/32

41

OCT 14 1976

Memorandum

To: Oregon State Director, Bureau of Land Management

From: Regional Director, Northwest Region, Bureau of Outdoor Recreation

Subject: Review of Draft Environmental Impact Statement concerning Pacific Power and Light Company's Proposed 500 Kv powerline, Midpoint, Idaho-Medford, Oregon

We have reviewed the subject document and offer the following comments:

Page II-190, last paragraph: We suggest adding:

> The Bureau of Outdoor Recreation is presently making a study of the Owyhee River as required in Section 5(a) of the Wild and Scenic Rivers Act, P.L. 90-542, as amended. The study tentatively recommends legislative action to include the 171-mile segment of the Owyhee River from the western boundary of the Duck Valley Indian Reservation in Idaho, downstream to the Owyhee Reservoir in Oregon, under administration of the Bureau of Land Management and the State of Oregon.

Page III-92, Owyhee River: The following revision is offered;

> The proposed right-of-way crossing of the Owyhee River would represent an inharmonious intrusion across a generally undisturbed canyon area which presently is under consideration for inclusion in the National Wild and Scenic Rivers System. Esthetic impacts would result from skyline visibility of transmission towers and conductors from the river. Visibility would be particularly pronounced under reflective light conditions.

In the second paragraph, after the first sentence add:

> Visitation by float boaters and other recreationists is expected to increase in the future whether or not the river

is included in the system. However, the impact of the powerline as presently designed on wild and scenic river values is not considered significant. The potential impact is lessened because the proposed crossing is located near the terminus of Three Forks to Rome float boat river trips. The potential impact is further lessened by other landscape intrusions (roads, farmland, and related developments) presently existing in the general vicinity of Rome.

Maurice H. Lundy
for Regional Director

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, IDAHO 83706

STATE MUSEUM

October 12, 1976

47

Mr. Murl W. Storms
Oregon State Director
Bureau of Land Management
Post Office Box 2965
Portland, Oregon 97208

Dear Mr. Storms:

Thank you for the opportunity to comment on the draft Environmental Impact Statement of the proposed 500 KV powerline from Midpoint, Idaho to Medford, Oregon. My comments concern the identification and protection of archaeological and historical properties.

Following the guidelines of the Council of Environmental Quality (40 CFR 1500) the responsibilities of a reviewer of an environmental impact statement are to appraise the agency's assessment of the impacts to the environment by the proposed actions, and to comment on the acceptability of these impacts vis-a-vis the alternative agency actions.

Unfortunately the draft EIS of the proposed powerline does not contain enough information on the archaeological resources, and the impacts to those resources, for me to comment. An adequate inventory of the archaeological sites has not been completed for any of the proposed routes of the powerline. Thus one can not determine the impact to these sites by the proposed action.

I recommend that information be included in the final EIS that would allow a reviewer to appraise the impact of the project on the area's archaeological and historical properties. This will require a detailed archaeological reconnaissance of the proposed and alternative routes of the powerline.

The proposals for the mitigation of impacts(IV-2) to archaeological sites seem adequate, but they are premature as we do not yet know what the impacts may be.

Sincerely,

Thomas J. Green

Thomas J. Green
Acting State Archaeologist

PACIFIC POWER & LIGHT COMPANY
PUBLIC SERVICE BUILDING
PORTLAND, OREGON 97204

E. B. HEOBERG
VICE PRESIDENT

October 15, 1976

Mr. Murl Storms, State Director
Bureau of Land Management
729 N. E. Oregon Street
P. O. Box 2965
Portland, Oregon 97208

56

Dear Mr. Storms:

Pacific Power & Light Company welcomes the opportunity to comment on the Draft Environmental Impact Statement of its proposed 500 kv line from Midpoint, Idaho to Medford, Oregon, as it represents the completion of a significant milestone in the NEPA process. The Company has highlighted several areas of concern in the DEIS which we believe should be addressed in the Final Environmental Impact Statement.

1. Pacific believes that construction of the proposed project will not necessarily increase access in many of the "roadless" areas alluded to in the DEIS. Roads creating access for four-wheel drive vehicles exist in many of these areas and are used by hunters. Consequently, the figures used to "quantify" wildlife habitat in the "roadless areas" adversely impacted by construction of the proposed project are inconsistent with a more complete description of the existing environment. Also, according to one study, "Big-Game Movement near 500 KV Transmission Line in Northern Idaho," by John G. Goodwin, the existence of a right-of-way does not necessarily adversely impact wildlife behavioral patterns.

2. Pacific believes that completion of the proposed project will not have a significant adverse impact on waterfowl populations as implied in the DEIS. Our conclusion is based upon consultations with recognized authorities and an extensive review of the literature, including two relatively recent papers, "Waterfowl Studies at Lake Sangchrist," by William L. Anderson, Sarah S. Hurley, and James W. Seets, and "Bird Deaths from Power Lines at Dungeness," by R. E. Scott, L. J. Roberts, and C. J. Cadbury.

3. Pacific believes that the DEIS should discuss more thoroughly the beneficial aspects to the environment of increased energy availability in the market area. Such a discussion should focus on the contribution that available energy would make on solving air and water pollution problems.

4. Pacific believes that the proposed crossing of the Owyhee River will not have a significant impact on the values of this river that would be protected by the Wild and Scenic Rivers Act. This position is supported by the Bureau of Outdoor Recreation (see copy of attached letter from Mr. Maurice H. Lundy, Regional Director, Bureau of Outdoor Recreation).

5. Pacific has mitigated to the satisfaction of the Idaho State Park Board the conflicts which existed near the Bruneau Sand Dunes State Park. The proposed realignment deemed acceptable to the Board was determined to have the least adverse environmental impacts to Idaho citizens.

6. Pacific believes that an explanation should be clearly made of the rationale for rating the various impacts in importance to decision-making which are implicit in the summary tables of VIII-79 and VIII-87.

   Pacific believes that its proposed route has the least adverse environmental impact of any of the routes when an objective evaluation of the impacts of the proposed project are made with all categories of impact receiving the same consideration. Such an evaluation was conducted by Pacific's consultant, VTN-Oregon. The results of that evaluation are attached.

7. It will be noted that Pacific Power & Light Company has not included any specific comments with respect to the proposed stipulations (mitigating measures) which are set forth in pages IV-4 through IV-19 and IV-25 to IV-43 of the DEIS. Our initial review of these stipulations indicates that some are acceptable, and would be appropriate to achieve their intended purposes.

   However, a number of these proposed stipulations either are impracticable of implementation, or would cause different environmental problems, or are unnecessary. Because of this, we suggest a meeting with representatives of BLM, the Forest Service, and Pacific Power at your earliest convenience to clarify these stipulations and adopt a set of stipulations which will be both effective and acceptable.

   In the meantime, we suggest that the EIS be revised to indicate that the stipulations contained therein are proposed and will be subject to modification as may be necessitated by circumstances. Otherwise, an amendment or modification of the stipulations after they have been contained in the FEIS may require an amendment to the FEIS, itself.

In addition to the above areas of general concern, Pacific has attached to this letter a list of comments referenced to subject, page, paragraph and line of the DEIS. If further clarification of these comments is indicated, we would be happy to provide additional assistance.

Pacific Power & Light Company hopes that these comments will contribute toward a more complete understanding of the environmental impacts of this proposed project and will expedite the completion of the NEPA process.

Sincerely,

EBH/hh
Attachments

10-15-76

PACIFIC POWER & LIGHT COMPANY COMMENTS ON BLM DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR PACIFIC'S PROPOSED 500 KV LINE FROM MIDPOINT, IDAHO TO MEDFORD, OREGON

ITEM	COMMENT
PAGE I-2	
Figure I-1:	
Hagerman, Owyhee Junction and Catlow Junction were not indicated on the map.	It would be helpful if Hagerman, Owyhee Junction, and Catlow Junction were indicated on the map so that the line segments discussed later in the text can be correctly identified.
PAGE I-3	
Par. 1, Line 1:	
....over two newly constructed....	Statement should read....over three newly constructed 345 kv transmission lines from Jim Bridger to the Idaho area; one ending at Kinport near Pocatello, one ending at Goshen near Idaho Falls, and one ending at the Borah Substation near American Falls.
PAGE I-8	
Table I-1, Line 4:	
This item indicates that Unit #2 is completed and will be in service in the fall of 1975.	Unit #2 is in service at this time.
Table I-1, Line 5:	
This item indicates that Unit #3 is under construction and will be in service in the summer of 1977.	Unit #3 construction is completed and is in service as of the summer of 1976.
PAGE I-17	
Line 1:	
....about 300 megawatts of its Southwestern Division load from power generated at its southwest Oregon-Northern California facilities.	This statement should be amended as follows: about 335 megawatts of its Southern Oregon and Northern California Division load from power generated within the area.
Par. 2:	
This paragraph discusses the West Group projection	This paragraph is unclear and should be revised.

PAGE I-17 (cont.)

Par. 3:

This paragraph discusses the disposition of surplus power from Wyoming.

This paragraph should be rewritten as follows: Surplus Wyoming power transmitted over the proposed line will in general be absorbed in the Southern Oregon-Northern California load area. At times, the line will be transmitting more power than can be absorbed on Pacific's Southwestern Division and would be used elsewhere in the Pacific Northwest.

PAGE I-19

Par. 3, Line 2:

....for about five miles....

Should read....for about nine miles....

PAGE I-21

Par. 1, Line 5:

In timbered areas only those trees tall enough to endanger or interfere with the conductors would be removed.

Implies clearing of trees would not be permitted for tower erection site, stringing the conductors, etc. This sentence should be amended to read: In timbered areas only those trees would be removed that are necessary for construction or which are tall enough to endanger or interfere with the conductors.

PAGE I-26 to PAGE I-29

Par. 4, Page I-26 to Par. 5, Page I-29, including Figures I-10 and I-11:

Due to more detailed design studies since the preparatio of the DEIS, the foundation designs, etc. have changed significantly. Pacific's new foundation designs include the following:

One foundation is required for each tower leg. An auger would be used to bore a hole into which concrete would be placed. Only the portion of the foundation above the ground surface would be formed. Excavated soil would be evenly spread in the immediate vicinity. About 40 cubic yards of concrete per tower would be obtained from commercial ready-mix plants in the vicinity of the construction site.

If temporary concrete batch plants would be necessary, they would be located at staging areas along the line route. Aggregate and water would be obtained from local commercial sources. Concrete would be delivered to tower sites by truck or helicopter. Steel grillage-type foundations are proposed for use in areas where it is not practical to auger holes for concrete foundations. These are rectangular lattice structures comprised of a series of interconnected angles, channels and plates (Figure I-10). These would be identified in the final project design stage.

One foundation is required for each tower leg. Each would be placed in a 11-foot x 11-foot x 13-foot deep hole excavated by backhoe, set to elevation, backfilled with excavated material and compacted. Excess excavated soil would be evenly spread in the immediate vicinity. Prior to tower erection, only the tower leg connection point would be visible above the ground.

Table I-7 depicts the estimated number of footings required and amount of soil disturbance that would occur based upon grillage-type footings.

TABLE I-7
ESTIMATED NUMBER OF TOWER FOOTINGS AND ASSOCIATED SOIL DISTURBANCE

Segment	Miles	Towers	Footings	Soil Disturbed
Midpoint-Malin	391	1,689	6,756	8 acres
Malin-Medford	92	398	1,592	2 acres
TOTAL	483	2,087	8,348	10 acres

This acreage is the area disturbed in addition to that already accounted for in clearing for tower sites.

In areas of unstable soil conditions, such as portions of Little Valley, Bruneau Valley, Whitehorse Ranch, line route north of Fields, Warner Valley, Flynn Meadows, line route north of Lakeview and Lower Klamath Lake, driven piling may be required. They would be installed by a pile driver. After installation, only the top of the concrete foundation, which would connect the tower to the piling, would be visible above the ground.

Approximately half of the towers would have cast-in-place concrete footings, the remainder being grillage or on piling.

Foundation crews would normally consist of about 35 men, completing about 15 miles per month.

Tower Assembly and Erection

. . . . . .

PAGE I-37

Par. 3, Line 4:

....would be shipped in bundles, preasembled, and....

If the assembly is done by conventional means, all assembly would take place at the tower site. This statement should be revised to read: ....could be shipped in bundles and transported....

PAGE I-44

Par. 4, Line 2:

Estimated to take 21 months.

This has been revised. See attached revised construction schedules and vicinity map.

PAGE II-59

Line 2:

....would most likely to be found....

Implies that these plants probably occur in the ROW. No evidence that this is so. Suggest revision: .... could be found....

PAGE II-84

Par. 7:

Par. 7 indicates that the proposed route lies next to a mule deer winter range, antelope range and big horn sheep range.

This is inconsistent with Map Appendices A-2 and B-2. The proposed right-of-way comes to within one-half mile of the southern end of a mule deer winter range. It lies between two antelope ranges--one range containing 40 animals, which lies approximately four miles away from the route and the other range containing 50 animal which abuts the proposed right-of-way. At one point the proposed ROW lies 2.5 miles north of a big horn sheep range containing approximately 100 animals.

PAGE II-87

Par. 1:

This paragraph indicates that the proposed line would pass through an elk range and border an interstate mule deer winter range.

According to Map Appendices A-2 and B-2, the proposed right-of-way crosses approximately 3 miles north of one range and 4 miles south of another elk range. At one point the proposed right-of-way borders the deer winter range. However, the major concentration of these animals is centered in the Three Forks area of the Owyhee River, which lies approximately 20 miles south of the proposed right-of-way.

PAGE II-94

Par. 5, Line 2:

....Klamath marshlands....

These "marshlands" have been "reclaimed" and are used for agricultural purposes.

PAGE II-98

Table II-26, Line 2, Column 3:

Siskiyou Mountain Salamander

The listing of the Siskiyou Salamander may be incorrect as the range of this species is further to the south and west.

PAGE II-130

Par. 4:

This paragraph discusses impacts on forestry and agriculture.

At the end of this series of paragraph which discuss loss of productivity, it should be pointed out that except for forest lands, the only area within the right-of-way taken out of production will be the specific tower locations amounting to .015 acre per tower, or .065 acre per mile.

PAGE II-206

Par. 1:

Labor trends.

The figures used do not reflect current figures of over 50,000 for Jackson County.

PAGE II-220

Par. 2, Line 2:

....little change is anticipated under the existing use of lands....

It is true that land use will change little; however, there is evidence that the Klamath populations have decreased because of attractions for areas in the State of Washington where greater amounts of food are available during the fall season.

PAGE II-226

Par. 4, Line 3:

Jackson County....(p.227) is the exception.

Klamath and Lake Counties, which are in Pacific's Southwestern Division, will benefit from added power produced by this line.

PAGE II-227

Line 2:

....would not appear (to be) a factor influencing the future environment.

This conclusion is inconsistent with the experience of the electric utility industry. See testimony of Mr. Lynn Newberry presented at the BLM hearings on this DEIS in Medford, Oregon.

PAGE II-231

Table II-49:

This table references the number of Pacific's electric customers by district.

More up-to-date information is available. See attached document.

PAGE III-1

Par. 1, Line 1:

....considers the expected unmitigated....

Pacific feels that more emphasis should be placed on the fact that many of the impacts described have been mitigated more years. It should be clearly pointed out that this section represents a scenario of what could happen in the absence of mitigation. There are many who will not read this statement in its entirely and they may interpret some of the statements in this chapter incorrectly.

PAGE III-2

Par. 1, Line 1:

....is good....

Add to first sentence: ....except for intermittent periods in the Medford airshed.

PAGE III-25

Par. 4, Line 8:

There are no residences.

Statement should be amended to read: There are some residences.

PAGE III-39

Par. 5:

References to the effects of noise on wildlife are made in this and the successive chapters.

The specific example of effects on nesting eagles and hawks are inconsistent with Pacific's experience. Our experience has been that eagles, hawks and other raptors tolerate noise as evidenced by eagles' behavior at Iron Gate, and roosting behavior near Worland, Wyoming. Deer, antelope and other wildlife habitually utilize our surface mine areas in Wyoming where blasting occurs and draglines and haul trucks operate. Any effects, if at all, would be short term in duration. Impacts due to maintenance and inspection would probably not occur.

PAGE III-40

Par. 3:

References to the effects of loss of riparian habitat are made.

A temporary 3 acres of loss of riparian habitat would have minor, if any, impacts on riparian habitat dwellers (see Page III-45).

PAGE III-45

Line 1:

The temporary loss of 3 acres....would be important.

Comment on Page III-40 would apply. It is difficult to visualize how the temporary loss of 3 acres would be important to populations of riparian dwellers.

Line 3:

It is possible....would receive silt pollution, resulting in the loss....

Temporary siltation, if it was to occur, would have little effect on fish and fish forage species. Aquatic forms are adapted to periodic silt loads.

PAGE III-46

Par. 2, Line 5:

Some losses are anticipated....

This passage is inconsistent with statement in paragraph 4, line 5, Page III-48, which states....could result in losses.... Pacific suggests that this statement be amended to: Some losses could occur by collision....

PAGE III-46 (cont.)

Par. 3, Line 6:

If 1/2 percent of 1 percent....

Pacific disagrees with these figures as no basis exists in the literature for these calculations.

Par. 4:

This paragraph references effects on eagles caused by noise and associated disturbance.

The comment on Page III-39 applies here, as well.

PAGE III-47

Par. 2, Line 4:

....causing antelope to vacate part....

Any displacement would be temporary and not permanent, as implied. The figures used are speculative.

Par. 4, Line 4:

....resulting in the loss of the young birds....

Pacific does not agree that such losses would occur. According to conversations held with Birds of Prey and Natural Area personnel, such losses probably would not occur.

PAGE III-49

Line 1:

Additional 20 raptors per year....

The source of this information and the basis for this estimate should be included.

PAGE III-52

Par. 4, Line 1:

....could have some detrimental effect on deer migration movements.

This statement is inconsistent with previous experience with 500 KV lines. A study in 1975 by John Goodwin (Big Game Movement near a 500 KV Transmission Line in Northern Idaho) indicated no such problems were observed.

PAGE III-54

Table III-14:

References adverse impacts on an acreage basis to wildlife and wild horse habitat.

Although the one-mile fringe may be logical for an impact area during the hunting season, it is not a logical boundary during winter feeding. The animals will actuall use the right-of-way if food is available (see Par. 3, Page III-36) and comment on Page III-52. Consequently,

PAGE III-54 (cont.)

	the adverse impact acreages are unrealistic, misleading and inconsistent with the fact that many forms of wildlife are very tolerant of human activity.

PAGE III-56

Par. 1, Line 2:	
....absent 187 acres of habitat.	This figures is inconsistent with Table 13-13 which indicates that 64 acres lost to roads and 12 lost to substations.
Par. 2, Line 1:	
....on this proposed 92-mile-long route....	Right-of-way already exists on portions of the 92 miles as do other roads.
Par. 2, Line 2:	
....could be built....	This is inconsistent with Pacific's earlier statements that no permanent roads will be established and work roads will be closed in critical areas. Consequently, the impact figures are merely speculative; also there is no consideration for those areas that are already accessible to hunting.
Par. 3, Line 1:	
Additional access....sensitive areas such as Jenny Creek...	See above comment.

PAGE III-57

Par. 5, Line 3:

New access across this....

The proposed line would parallel an existing wood pole line except for a separation near the Weyer-Hauser tree research area. See Comments Page III-56, Par. 2, Line 2.

PAGE III-61

Par. 1, Line 1:

Construction of a new access....

Same comments apply here as for Page III-56, Par. 2, Line 2.

PAGE III-64

Par. 1, Line 1:

Any loss of riparian....vegetation could have serious consequences....

The temporary loss of 3 acres could hardly have serious consequences--to individuals, yes--populations, no.

PAGE III-65

Table III-16:

References adverse impacts on an acreage basis to wildlife and wild horse habitat.

The comments on Table III-14 (Page III-54) apply here, as well.

PAGE III-76

Par. 4, Line 5:

....within a mile of the route has not been made.

An exact count of 90 residences has been made within 1/2-mile of the proposed route.

PAGE III-81

Par. 1, Line 2:

An exact count...not not been made.

See previous comment.

PAGE III-94

Par. 1, Line 1:

....result from the "angular" crossing of the open Camas Prairie....

The present alignment of the proposed route avoids crossing the Camas Prairie.

PAGE III-98

Par. 2, Line 3:

Visual impacts would be accentuated....

There will be no towers in the Klamath River Canyon--the proposed line will span the canyon.

Par. 4, Line 4:

....of an existing 230 kv transmission line.

There is more than one transmission line crossing the Pacific Crest Trail at this point.

PAGE VI-8

Lines 6 and 7:

....environmental decay....

Pacific does not agree that economic growth and development are necessarily accompanied by a measure of environmental decay.

Line 11:

....could be adverse in the long term.

Pacific does not agree that increased energy availability would necessarily adversely impact the market area in the long term.

PAGE VIII-1

Alternatives to the Proposed Project

Several references are made in this section to tax advantages to be gained by counties due to increased mileage of the alternate routes. It should also be pointed out in all cases that any "advantage" is offset by increased costs that Pacific's ratepayers must absorb.

PAGE VIII-20

Line 6:

Preceding sentence describes wildlife on Alt. #1.

The description is incomplete. Nesting sites for golden eagles have been reported on Walter's Butte near Walter's Ferry.

PAGE VIII-30

Par. 2, Line 6:

Scenic qualities....are generally low, resulting from an overall lack of visual constraint.

The visual contrast of foothills and sky in this portion are highly scenic or picturesque to visitors or residents traveling on roads south of Homedale and Marsing.

PAGE VIII-40

Analysis of Impacts--Alternate Route #1:
General:

....with an estimated 13 percent longer construction period....

This is an incomplete statement. This route would cause a delay in completion of 1-1/2 to 2 years....

PAGE VIII-51

Table VIII-14 References:

Adverse impacts on wildlife habitat.

The comment on Table III-14, Page III-54, applies here, as well.

PAGE VIII-67

Par. 1, Line 2:

....would increase construction costs.

This alternate route would increase construction costs at least $9 million. See also comment for Page VIII-1.

PAGE VIII-76

Par. 4, Line 5:

This sentence describes the aesthetic environment on this segment of the alternate.

The description does not mention the Reynolds Creek Back Country area and the Twin Peaks scenic area.

PAGE VIII-87

Table VIII-27 References:

....unavoidable impacts on wildlife.

The comment on Table III-14, Page III-54, applies here, as well.

PAGE VIII-88

Table VIII-28 References:

Visual impacts of this alternate route.

The visual intrusion on the Reynolds Creek Back Country area and the Twin Peaks scenic area are not mentioned.

PAGE VIII-89

Par. 1 and Par. 2:

Discuss visual aesthetic impact.

Aesthetic impact on the Reynolds Creek Back Country area and Twin Peaks scenic area are not mentioned.

PAGE VIII-92

Par. 5, Line 2:

....requires more of a capital investment.... among affected counties.

This alternate route requires an additional capital investment of at least $3.5 million and could delay the project as much as two years due to additional surveying, mapping and obtaining right-of-way.

PAGE VIII-121

Table VIII-39:

References adverse impacts on wildlife habitat.

The comments on Table III-14, Page III-54, apply here, as well.

PAGE VIII-126

Par. 6, Line 2:

....so construction costs would be expected to be higher.

This alternate route would cost at least $6.8 million more than the proposed route. Completion of the project could be delayed at least two years. See also general comment of Page VIII-1.

PAGE VIII-140

Par. 4, Line 4:

....would increase construction costs....

This alternate route would increase construction costs at least $10.3 million and would cause a delay of 2 years See also general comment of Page VIII-1.

PAGE VIII-141

Par. 2, Line 5:

....of the valley between Ashland and Medford...

The proposed alternate would parallel portions of I-5 between Ashland and Medford. As such, the transmission line would be clearly visible by the citizens of Ashland, Phoenix, Talent and Medford.

PAGE VIII-151

Table VIII-51:

References major highway and road crossings.

The table should also reference paralleling of I-5.

PAGE VIII-163

Table VIII-58:

References adverse impacts on wildlife habitat.

The comments on Table III-14, Page III-54, apply here, as well.

PAGE VIII-192

Table VIII-70:

References adverse impacts on wildlife habitat.

The comments on Table III-14, Page III-54, apply here, as well.

PAGE VIII-200

Table VIII-74:

References adverse impacts on wildlife habitat.

The comments on Table III-14, Page III-54, apply here as well.

PAGE VIII-203

Table VIII-97:

References comparative impacts of each alternate route and the proposed route. Line 12, Column 1.

These study areas presumably are in addition to the Owyhee Mounatains. Are these the Toy Mountain and Boulder Creek Study area?

Line 12, Column 3, notes impacts on roadless study areas.

The Twin Peaks Scenic area and Rehnolds Creek Back Country area are not indicated.

PAGE VIII-205

Tables VIII-79 and VIII-87 are an evaluation of unavoidable impacts of the proposed and alternate routes and a rating of the importance of these impacts to decision-making.

Pacific questions the assumptions that are implicit in Tables VIII-79 and VIII-87. Specifically, we suggest that an explanation should be clearly made of the rationale for rating the various impacts in importance to decision-making. Where there is no ranking of routes by categories such as Economics and Social, an explanation of the ranking developed in these tables should be included.

The use of subjective ratings of this nature in an attempt to objectively compare these values, can lead to highly distorted results. For instance, if a high rated impact is given a numerical rating of 3 and the lowest rated impact a value of 1, Alternate Route #1 would appear to be 14 points better than Pacific's proposed route. However, over half of this differential can be attributed to the vegetation category where a difference of only eight acres of vegetation permanently lost Table VIII-73 exists between the routes.

If, however, the categories are rated equally to eliminate subjective biases, then a different conclusion would result. Pacific has attached an evaluation of the comparative impacts when all categories are rated equally.

PAGE VIII-205 (cont.)

This evaluation, "Assessment of Draft Environmental Impact Statement· Pacific Power & Light Company Proposed 500 KV Power Line, Midpoint, Idaho - Medford, Oregon," was prepared by VTN-Oregon.

PAGE VIII-235

Par. 2, Line 1:

However, it may be possible to upgrade and/or replace....

Uncontested testimony at Public Utility Commission proceedings in Oregon and Idaho indicate that upgrading or replacing existing transmission facilities is not a viable alternate to this line and furthermore, could not be completed with the required time frame.

PAGE VIII-237

Par. 1, Line 11:

....contribute toward a general deterioration of the quality of life...

It should also be pointed out by example that insufficient energy could lead to the curtailment in use of anti-pollution devices, thus contributing to air and water pollution problems.

PAGE VIII-238

Par. 2:

This paragraph discusses realignment of the proposed route around Bruneau Sand Dunes.

The proposed route has been realigned and the visual impacts mitigated to the satisfaction of the Idaho State Park Board.

PAGE VIII-241

Par. 2, Line 1:

....approximately 2 miles north through....

This proposed realignment is in virtually all private land and would cause delay in completion of the line due to right-of-way acquisition, surveying and mapping.

PAGE VIII-241 (cont.)

Par. 3, Line 2:

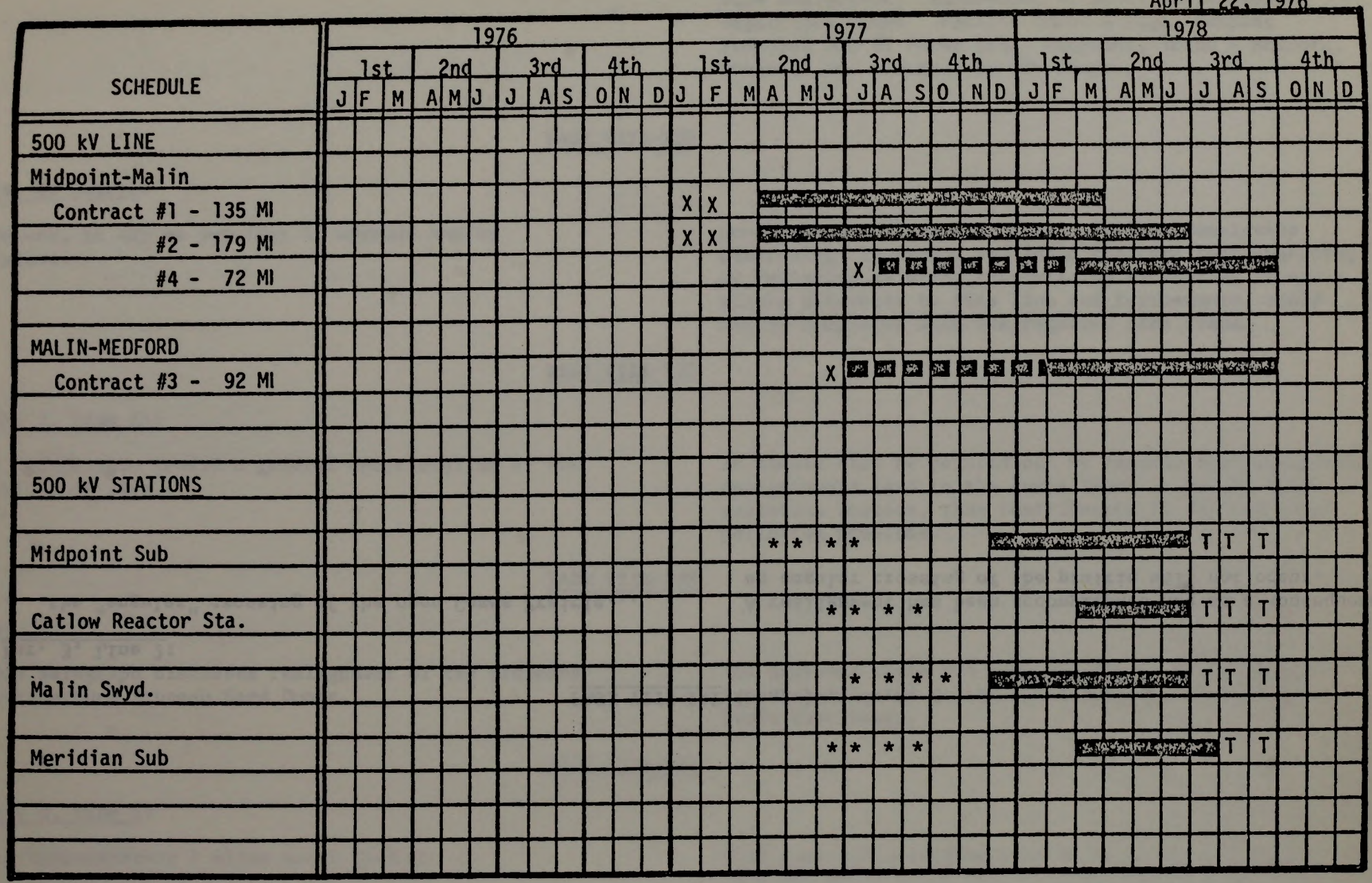
....the "angular" crossing of the open Camas Prairie...

A realignment has been accomplished and as a consequence an angular crossing of the prairie will not occur.

MIDPOINT-MALIN-MEDFORD

CONSTRUCTION SUMMARY

Revised June 1, 1976
April 22, 1976



Key

X - Bid

◀ ▲ ▶ Roads & Clearing

* - Grading & Foundations

T - Testing

FORM 2101

PLEASE REFER TO FILE NO.

PACIFIC POWER & LIGHT COMPANY
INTERNAL CORRESPONDENCE

SUBJECT: S.A.V.E. Report
Three Quarters, 1976

October 15, 1976

TO: OFFICERS
DEPARTMENT HEADS
DIVISION MANAGERS
DISTRICT MANAGERS

Highlights of Comparison of New Residential Load
Three Quarters 1976 vs 1975

Residential Units Connected: An increase of 34% to 12,164 units compared to 9,102 units the previous year. Outside Wyoming the increase was 36% with 9,580 units compared to 6,887 units in previous year.

Single Family Homes: An increase of 36% to 6,183 units compared to 4,446 units the previous year. Outside Wyoming the increase was 44% with 5,094 units compared to 3,609 units the previous year. Electric heated homes advanced from 86% in 1975 to 91% in 1976 in the five-state service area outside Wyoming.

Multi-Family Units: An increase of 127% to 2,370 units compared to 1,042 units the previous year. Outside Wyoming the increase was 152% with 1,867 units compared to 740 units the previous year. Outside Wyoming electric heated units decreased from 96% to 91% principally due to 124 units in Klamath district using geothermal heating.

Mobile Homes: A slight decrease to 3,611 units compared to 3,614 units the previous year. Outside Wyoming the increase was 3% with 2,619 units compared to 2,538 units the previous year. A slight increase in electric heated mobile homes - from 82% to 84% in 1976 occurred in the area outside Wyoming.

The Wyoming Division comparison of new residential load is presented below:

	This Year	Last Year	Percent Increase Over Last Year
Single Family Homes	1,089	837	+30
Multi-Family Units	503	302	+67
Mobile Homes	992	1,076	- 8
TOTAL	2,584	2,215	+17

The complete three quarters, 1976, data on residential and commercial-industrial loads connected is provided as an enclosure for your reference with a brief data summary on the reverse side of my letter.

Robert A. Dady

Robert A. Dady

mae
Enclosures

Noted: R.B.

PACIFIC POWER & LIGHT COMPANY
NEW RESIDENTIAL LOAD CONNECTED

Three Quarters, January - September, 1976

Residential Class	Total Company	Total Company (Excl. Wyo.)	Total Oregon	Total Washington	Total Wyoming
Single Family Homes					
No. Connected	6183	5094	3974	609	1089
No. Elec. Heat	4705	4614	3598	550	91
% Electric Heat	76	91	91	90	8
% Gas Heat	21	6	6	8	92
% Other Heat	3	3	3	2	
% Elec. Water Htg.	80	95	95	98	11
Multi-Family Units					
No. Connected	2370	1867	1318	418	503
No. Electric Heat	1707	1692	1161	412	15
% Electric Heat	72	91	88	99	3
% Gas Heat	22	2	2	1	97
% Other Heat	6	7	10		
% Elec. Water Htg.	78	98	98	100	3
Mobile Homes					
No. Connected	3611	2619	1891	432	992
No. Electric Heat	2220	2204	1579	396	16
% Electric Heat	61	84	84	92	2
% Gas Heat	36	12	13	4	98
% Other Heat	3	4	3	4	
% Elec. Water Htg.	67	89	88	98	7
Total All Residential					
No. Connected	12164	9580	7183	1459	2584
No. Electric Heat	8632	8510	6338	1358	122
% Electric Heat	71	89	88	93	5
% Gas Heat	26	7	8	5	95
% Other Heat	3	4	4	2	
% Elec. Water Htg.	76	94	94	98	8

PACIFIC POWER & LIGHT COMPANY

Number of Electric Customers
by Districts & Sub Offices
September, 1976

	NUMBER AT SEPTEMBER 30, 1976					INCREASE OVER LAST YEAR				
	Total Customers	Residential	Commercial	Industrial	Other	Total Customers	Residential	Commercial	Industrial	Other
MID-OREGON DIVISION										
Astoria	9 155	7 844	1 252	43	16	165	151	26	-	(12)
Seaside	6 622	5 822	778	5	17	100	122	(16)	-	(6)
Total Clatsop	15 777	13 666	2 030	48	33	265	273	10	-	(18)
Lincoln City	6 213	5 552	641	9	11	110	120	(6)	-	(4)
Albany	17 554	15 027	2 466	50	11	665	628	39	(1)	(1)
Lebanon	7 119	6 199	899	17	4	249	189	62	(2)	-
Stayton	7 178	5 955	1 185	26	12	223	238	(12)	-	(3)
Sweet Home	4 765	4 203	543	17	2	119	126	(5)	(1)	(1)
Total Albany	36 616	31 384	5 093	110	29	1 256	1 181	84	(4)	(5)
Corvallis	16 915	14 812	2 054	36	13	136	73	69	(1)	(5)
Dallas	5 126	4 503	603	15	5	223	215	13	(1)	(4)
Independence	2 315	1 905	398	10	2	92	85	8	(1)	-
Total Corvallis	24 356	21 220	3 055	61	20	451	373	90	(3)	(9)
Junction City	10 218	8 389	1 774	47	8	328	302	26	1	(1)
Cottage Grove	9 316	8 047	1 236	26	7	321	319	1	2	(1)
Springfield	-	-	-	-	-	-	-	-	-	-
Bend	11 475	9 762	1 684	27	2	560	518	43	(1)	-
Prineville	4 743	3 872	851	17	3	151	119	30	2	-
Redmond	4 002	3 237	750	13	2	185	124	59	4	(2)
Madras	3 864	2 891	957	9	7	123	106	17	-	-
Total Central Oregon	24 084	19 762	4 242	66	14	1 019	867	149	5	(2)
Portland	59 847	53 048	6 479	103	217	370	336	42	1	(9)
Hood River	4 683	3 713	940	15	15	79	58	23	-	(2)
The Dalles	-	-	-	-	-	(6 153)	(5 028)	(1 085)	(19)	(21)
TOTAL MID-OREGON DIVISION	191 110	164 781	25 490	485	354	(1 954)	(1 199)	(666)	(17)	(72)
SOUTHWESTERN DIVISION										
Coos Bay	14 803	12 850	1 884	61	8	269	281	(11)	2	(3)
Coquille	5 622	4 642	951	26	3	124	118	6	-	-
Total Coos Bay	20 425	17 492	2 835	87	11	393	399	(5)	2	(3)
Grants Pass	25 086	21 759	3 265	54	8	1 134	1 024	120	(5)	(5)
Medford	40 051	35 209	4 701	113	28	1 320	1 289	31	6	(6)
Roseburg	19 999	17 283	2 632	63	21	701	664	41	2	(6)
Myrtle Creek	5 788	4 879	878	19	12	191	179	11	-	1
Total Roseburg	25 787	22 162	3 510	82	33	892	843	52	2	(5)
Klamath	22 356	18 762	3 534	30	30	261	454	(182)	(2)	(9)
Tulelake	2 801	1 824	963	10	4	(35)	(14)	(21)	-	-
Total Klamath Falls	25 157	20 586	4 497	40	34	226	440	(203)	(2)	(9)
Lakeview	2 525	2 010	494	20	1	64	67	(1)	(2)	-
Alturas	1 940	1 488	438	10	4	26	26	(1)	-	1
Total Lakeview	4 465	3 498	932	30	5	90	93	(2)	(2)	1
Crescent City	7 006	5 865	1 116	21	4	231	227	5	(1)	-
Yreka	9 349	7 308	2 001	32	8	341	281	64	(4)	-
Mt. Shasta	6 690	5 602	1 066	10	12	115	90	25	-	-
Total Yreka	16 039	12 910	3 067	42	20	456	371	89	(4)	-
TOTAL SOUTHWESTERN DIVISION	164 016	139 481	23 923	469	143	4 742	4 686	87	(4)	(27)

PACIFIC POWER & LIGHT COMPANY

Number of Electric Customers
by Districts & Sub Offices
September, 1976

	NUMBER AT SEPTEMBER 30, 1976					INCREASE OVER LAST YEAR				
	Total Customer	Residential	Commercial	Industrial	Other	Total Customer	Residential	Commercial	Industrial	Other
COLUMBIA BASIN DIVISION										
Pendleton	9 508	7 807	1 646	49	6	221	173	46	3	(1)
Hermiston	6 308	5 188	1 094	16	10	1 661	1 283	368	4	6
Total Pendleton	15 816	12 995	2 740	65	16	1 882	1 456	414	7	5
Enterprise	3 593	2 920	657	14	2	70	85	(12)	(1)	(2)
Walla Walla	17 513	14 774	2 706	27	6	549	573	(21)	(2)	(1)
Freewater	1 420	893	527	-	-	15	16	(1)	-	-
Dayton	3 700	2 952	735	10	3	39	43	(3)	-	(1)
Total Walla Walla	22 633	18 619	3 968	37	9	603	632	(25)	(2)	(2)
Sunnyside	7 349	6 002	1 281	55	11	272	179	96	(4)	1
Grandview	3 165	2 659	479	22	5	122	85	36	1	-
Toppenish	5 592	4 336	1 220	28	8	87	74	14	(1)	-
Wapato	5 078	3 805	1 216	47	10	153	79	73	1	-
Total Sunnyside	21 184	16 802	4 196	152	34	634	417	219	(3)	1
Yakima	45 713	38 819	6 593	252	49	1 296	1 060	233	2	1
Sandpoint	6 617	5 526	1 055	26	10	287	202	83	-	2
Kalispell	11 787	9 948	1 801	35	3	458	310	152	(1)	(3)
Columbia Falls	2 073	1 797	269	6	1	34	18	16	-	-
Whitefish	3 324	2 855	465	1	3	171	148	23	-	-
Libby	4 016	3 357	651	3	5	80	52	29	(1)	-
Total Kalispell	21 200	17 957	3 186	45	12	743	528	220	(2)	(3)
TOTAL COLUMBIA BASIN DIVISION	136 756	113 638	22 395	591	132	5 515	4 380	1 132	1	2
WYOMING DIVISION										
Casper	23 858	20 355	3 271	217	15	1 598	1 380	226	15	(23)
Buffalo	2 028	1 677	342	6	3	99	81	17	-	1
Douglas	3 233	2 514	687	25	7	395	308	82	3	2
Glenrock	1 359	873	174	308	4	74	73	12	(11)	-
Total Casper	30 478	25 419	4 474	556	29	2 166	1 842	337	7	(20)
Worland	3 227	2 434	602	187	4	138	87	37	16	(2)
Cody	1 236	871	318	45	2	105	88	15	2	-
Greybull	1 215	978	216	19	2	20	20	-	-	-
Lovell	2 438	1 791	398	238	11	(53)	67	12	(131)	(1)
Thermopolis	2 237	1 719	441	72	5	49	28	18	5	(2)
Total Big Horn Basin	10 353	7 793	1 975	561	24	259	290	82	(108)	(5)
Riverton	4 828	3 940	859	25	4	199	158	55	4	(18)
Lander	3 208	2 692	511	3	2	155	128	27	(1)	1
Total Wind River	8 036	6 632	1 370	28	6	354	286	82	3	(17)
Laramie	9 435	8 295	1 107	24	9	477	403	65	7	2
Rawlins	5 264	4 322	891	33	18	209	174	38	(5)	2
Rock Springs	8 662	7 476	1 004	176	6	202	148	60	(3)	(3)
Green River	4 025	3 592	411	16	6	559	519	34	3	3
Total Rock Springs	12 687	11 068	1 415	192	12	761	667	94	-	-
TOTAL WYOMING DIVISION	76 253	63 529	11 232	1 394	98	4 226	3 662	698	(96)	(38)
General	12			1	11	(4)			-	(4)
TOTAL COMPANY	568 147	481 429	83 040	2 940	738	12 525	11 529	1 251	(116)	(139)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
NORTHWEST REGION
915 SECOND AVENUE, RM. 990
SEATTLE, WASHINGTON 98174

IN REPLY REFER TO:
D42-Owyhee

JUL 23 1976

John C. Cheek
Project Coordinator
Pacific Power and Light Company
Public Service Building
Portland, Oregon 97204

Dear Mr. Cheek:

We are pleased to reply to your June 21 letter concerning the proposed power line crossing of the Owyhee River near China Gulch.

Contrary to what apparently is your interpretation of the Wild and Scenic Rivers Act,(copy enclosed) power line crossings of Wild and Scenic Rivers are not precluded since they do not fit the category of a water resources project as covered in Section 7 of the Act. Where a power line crossing becomes necessary, our interest is in assuring that the location and design is such as to have the least possible impact on the natural and scenic values of the river involved.

Based on available information, including the recent field inspection of the proposed crossing by Stan Young of this office, in company with yourself and BLM area personnel, our preliminary judgment is that the crossing will have a minimal impact on river values. The crossing is situated below the deeply incised and scenic portion of the canyon, and it appears that the east tower, and likely the west tower, will be far enough back from the river to be out of sight from river level. However, we are constrained from taking a definite position until we have the benefit of the information available in the draft environmental statement now under preparation by the BLM as a consequence of Pacific Power and Light's application for a permit to construct the power line.

You suggested in your letter that the river from one-quarter to one-half mile above the crossing, downstream to Crooked Creek, remain undesignated. Since crossings are not precluded under the Wild and Scenic Rivers Act, as mentioned above, and because designation is necessary to provide protection against certain other uses, including mining, which could adversely affect fragile river values, we believe that if the river is added to the National Wild and Scenic Rivers System the segment in question should not be left undesignated.

As you know, the question of whether or not the Owyhee will be included in the National System is far from being resolved. Our office has yet to submit its recommendations to the Secretary of the Interior. Should the recommendation be made to include the river in the National System, a draft report and draft environmental statement must be circulated for comment to concerned parties. If, after such comment, the Administration recommends inclusion, legislation would then need to be introduced, public hearings held, and Congress act on the legislation. A time span of several years could well be consumed before the matter is finally resolved.

We appreciate your concern and we also appreciate the efforts taken by Pacific Power and Light to ameliorate effects of the crossing on river values as described in your letter.

Stan Young has requested that I convey his thanks for the courtesies extended by you during the recent field inspection.

Sincerely yours,

Maurice H. Lundy

Maurice H. Lundy
Regional Director

Enclosure

Copied for regular routing list
plus Lee Carothers 7-27-76 JHL

Attachment #1

JACKSON COUNTY

INDICATOR	UNIT	1960	1965	1970	1971	1972	1973	1974	1975
POPULATION	Number								
County Total		73,962	92,100	94,533	97,620	100,300	105,000	108,100	110,735
Medford		24,425	28,000	28,454	30,150	31,000	32,780	33,900	34,035
Ashland		9,119	11,800	12,342	13,000	13,980	14,400	14,500	14,400
Central Point		2,289	3,400	4,004	4,180	4,390	4,960	5,368	5,530
BUILDING PERMITS	$ Thou.								
Medford		$4,859.4	$10,700.0	$7,525.8	$10,153.5	$14,077.6	$15,961.9	$14,063.6	$22,146.4*
Ashland		1,466.9	4,235.0	6,484.1	3,934.1	8,688.7	3,262.8	4,012.1	4,110.3*
Central Point		497.1	1,279.2	849.0	892.8	1,783.6	2,531.2	1,555.4	1,853.1*
County Total	(N/A 1960-1974)								46,577.1
BANK DEPOSITS	$ Thou.	$69,217	$113,168	$163,086	$183,105	$216,866	$244,374	$252,605	$276,032
BANK LOANS	$ Thou.	$35,490	$69,130	$90,470	$105,609	$123,512	$141,519	$129,772	$131,141
RETAIL SALES	$ Thou.	$95,728	$143,855	$174,295	$202,503	$238,877	$283,065	$298,031	$318,773
PERSONAL INCOME	$ Mil.	---	$211.0	$303.6	$349.9	$391.4	$439.1	$495.6	
PER CAPITA INCOME	$	---	$2,363	$3,197	$3,545	$3,902	$4,129	$4,502	
GROSS FARM SALES	$ Mil.	$26.4	$28.3	$24.6	$25.8	$18.3	$24.5	$28.5	$27.1
TIMBER HARVEST	Thou. Bd. Ft.	454,725	443,483	314,525	428,744	560,903	420,948	493,031	
NEW REGISTRATIONS	Number								
Passenger Cars		---	3,949	3,343	4,368	4,417	4,778	3,240	3,738
Trucks & Buses		---	1,656	1,451	1,836	2,613	2,999	2,003	2,089

*Data not comparable with prior series.

JACKSON COUNTY

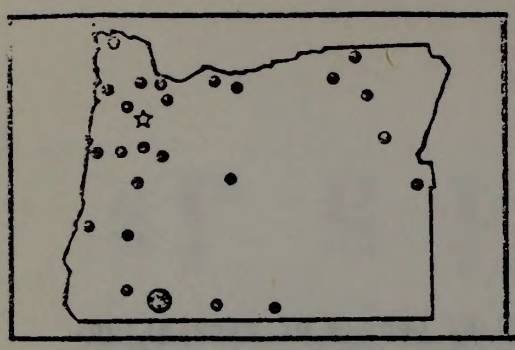
LABOR FORCE & EMPLOYMENT
(By Place of Residence 1970-1975)

Annual Average	1960	1965	1970	1971	1972	1973	1974	1975
CIVILIAN LABOR FORCE	26,260	32,900	37,240	40,800	44,450	47,060	47,200	48,660
Workers in Labor-Mgmt. Disputes	30	10	0	0	10	90	20	10
UNEMPLOYMENT	1,640	1,900	3,040	2,840	2,840	3,010	4,050	5,320
Percent of Labor Force	6.2%	5.8%	8.2%	7.0%	6.4%	6.4%	8.6%	10.9%
EMPLOYMENT	24,500	30,990	34,200	37,960	41,610	44,050	43,150	43,340
(By Place of Work)								
WAGE & SALARY WORKERS	17,700	23,720	26,500	29,070	31,730	33,550	33,930	34,210
MANUFACTURING	5,050	6.000	6,010	6,840	7,400	7,660	7,090	6,480
Lumber and Wood Products	3,950	4,590	4,570	5,190	5,710	5,790	5,200	4,720
Food Products	410	450	400	500	390	400	400	370
Other Manufacturing	690	960	1,040	1,150	1,300	1,470	1,490	1,390
NONMANUFACTURING	12,650	17,720	20,490	22,230	24,330	25,890	26,840	27,730
Contract Construction	850	1,520	810	1,100	1,380	1,640	1,810	1,620
Transportation-Comm.-Utilities	1,440	1,610	1,590	1,660	1,730	1,800	1,790	1,700
Wholesale & Retail Trade	4,030	5,350	6,600	7,220	8,110	8,680	8,800	9,130
Finance, Insurance & Real Estate	580	1,320	980	1,020	1,130	1,270	1,260	1,260
Service & Miscellaneous	2,300	3,220	4,500	4,930	5,260	5,690	6,000	6,330
Government	3,450	4,700	6,010	6,300	6,720	6,810	7,180	7,690

SOURCES

POPULATION:	U.S. Bureau of the Census, U.S. Census of Population, April 1, 1960, 1970; Portland State University, Center for Population Research and Census, July 1, 1965-1975.
BUILDING PERMITS:	University of Oregon, Bureau of Business and Economic Research, 1960-1974; Housing Division, Oregon Department of Commerce, 1975. (1975 data not comparable with prior series.)
BANK DEPOSITS:	Oregon Department of Commerce, Banking Division, Annual Report of the Superintendent of Banks.
BANK LOANS:	Oregon Department of Commerce, Banking Division, Annual Report of the Superintendent of Banks.
RETAIL SALES:	Sales Management Survey of Buying Power. Copyrighted data; further reproduction is forbidden.
PERSONAL INCOME:	U.S. Department of Commerce, Bureau of Economic Analysis, Social and Economic Statistics Administration.
PER CAPITA INCOME:	U.S. Department of Commerce, Bureau of Economic Analysis, Social and Economic Statistics Administration.
GROSS FARM SALES:	County Cooperative Extension Services, Oregon State University.
TOTAL TIMBER HARVEST:	Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.
MOTOR VEHICLE REGISTRATIONS:	Oregon Automobile Dealers Association, as compiled by Oregon Ad-Mail, Inc.
LABOR FORCE & EMPLOYMENT:	Oregon Department of Human Resources, Employment Division.

Data compiled by Economic Research Department, First National Bank of Oregon.



MEDFORD LOCAL OFFICE

LABOR FORCE TRENDS

STATE OF OREGON • EMPLOYMENT DIVISION • DEPARTMENT OF HUMAN RESOURCES

Prepared by Research and Statistics Section

Welden M. Stauffer, Manager 119 North Oakdale Phone 776-6081 August 1976

AREA SERVED
Jackson County

SUMMARY

A seasonal decrease in employment in state and local education was the primary cause of an overall decrease in total employment in Jackson County from 45,930 in June to 45,180 in July. Unemployment increased slightly over the month from 4,760 to 4,800. The rate of unemployment in Jackson County edged upward from 9.4 percent in June to 9.6 percent in July and was only slightly below the 9.8 percent rate for July 1975.

LABOR FORCE SUMMARY FOR JACKSON COUNTY
(By Place of Residence)

	July 1976	June 1976	July 1975	Change From June 1976	Change From July 1975
Civilian Labor Force 1/	49,980	50,690	49,120	-710	+ 860
Unemployment	4,800	4,760	4,830	+ 40	- 30
Percent of Labor Force	9.6	9.4	9.8	xxx	xxx
Seasonally Adjusted Percent	11.0	9.9	11.5	xxx	xxx
Total Employment 2/	45,180	45,930	44,290	-750	+ 890

NOTE: Estimates are subject to revision.
1/ Includes employed and unemployed individuals 16 years and older. Data are adjusted for multiple job holding and commuting.
2/ Includes nonagricultural wage and salary, self-employed, unpaid family workers, domestics, agriculture and labor disputants.

LABOR FORCE TRENDS

Employment increases in Jackson County between June and July occurred primarily in logging and in lumber and plywood production in the manufacturing sector and in transportation, services, forestry and local government in the nonmanufacturing sector. An overall decrease in trade employment took place because of seasonal layoffs in the retail mail-order industry that offset increases in other trade areas. The large drop in employment in public education resulted from the layoff of noncertified personnel and student workers for the summer months. Most of these employees either secured other employment or have temporarily left the labor force and are not among the unemployed.

(over)

Elsewhere, agricultural employment dipped from 2,260 in June to 2,180 in July with the completion of most pear thinning activity. The number of self-employed, unpaid family workers and domestics rose slightly from 7,020 to 7,090.

Total employment is up substantially when compared with year-ago figures. Resurgence for the 1974-75 recession has resulted in significant employment gains in the lumber and wood products industry, although employment among lumber producers is below last July's level. Despite the recovery of the past fifteen months, employment in lumber and wood products is till below the 5,810 total of July 1974 just prior to the slump. Nonmanufacturing employment is higher over the year by 850 with major gains in trade, services and government. Employment in contract construction is considerably lower because of decreased work on the lost Creek Dam. Increased residential and other nonresidential construction is maintaining employment in that industry at a high level, however.

Unemployment in Jackson County increased overall by 40 from June to July as an increase in claims filed for unemployment insurance offset a seasonal decline in the number of unemployed new entrants and reentrants in the labor force. Usually unemployment falls somewhat from June to July. The slight increase this year resulted in a sizeable jump in the seasonally adjusted unemployment rate for Jackson County from 9.9 percent in June to 11.0 percent in July. In comparison the seasonally adjusted unemployment rate for the State of Oregon remained at 9.4 percent over the month, while the national rate moved upward from 7.5 percent to 7.8 percent.

Of the 2,049 Jackson County residents receiving Oregon unemployment insurance benefit payments for the week ending July 17, 26.8 percent had been previously employed in wholesale or retail trade; 16.5 percent in the lumber and wood products industry; 15.3 percent in food processing and canning; 11.6 percent in government (including military): and 9.8 percent in the service industry. By occupation, 20.2 percent had worked previously in clerical and sales occupations, 20.2 percent in a miscellaneous category including logging, trucking, material handling and laboring jobs; 14.2 percent in structural trades; 10.6 percent in processing jobs (including fresh fruit sorting and packing); 9.7 percent in service occupations; and 8.8 percent in machine trades.

OUTLOOK

Usual seasonal patterns can be expected to prevail in Jackson County during the next few months. Employment in most industries should reach a peak during September or October before turning downward. Wet weather has hindered agricultural production this summer damaging much of the peach crop and delaying the pear harvest. Pear picking is expected to be well underway in Bartletts by the latter part of August, with an adequate labor supply. A shortage of labor may occur in September when the winter pear harvest begins. The pear harvest will also generate seasonal employment in the fresh fruit packing and shipping industry during September and October and later in the year in the mail-order gift pack trade. In addition, food products manufacturing will increase by 250-300 beginning in August or September as canning season starts.

Unemployment should resume its downward path in August, but start upward again in October when seasonal layoffs begin. The average annual unemployment rate for Jackson County should fall between 9.5 percent and 10.0 percent for 1976 compared with 10.9 percent for 1975.

NOTES:

The Employment Division is making a concerted effort to expose our placement services to potential applicants, as well as employers. We have a number of highly skilled and professional jobs. For example: Physician, Planning Coordinator, Loan Officer, Design Drafter, Dental Hygienist, and Legal Secretary. Do you know of a qualified person? Have them call 776-6060.

JACKSON COUNTY NONAGRICULTURAL WAGE & SALARY EMPLOYMENT
(By Place of Work)

Total	35,780	36,420	34,620	-640	+1,160
Manufacturing	7,430	7,240	7,120	+190	+ 310
Durable Goods	6,440	6,260	6,160	+180	+ 280
Lumber & Wood	5,670	5,490	5,390	+180	+ 280
Logging & Sawmills	1,890	1,780	1,960	+110	- 70
Veneer & Plywood	2,610	2,550	2,370	+ 60	+ 240
Other Wood Products	1,170	1,160	1,060	+ 10	+ 110
Other Durable Goods	770	770	770	0	0
Nondurable Goods	990	980	960	+ 10	+ 30
Food Products	310	310	290	0	+ 20
Other Nondurable Goods	680	670	670	+ 10	+ 10
Nonmanufacturing	28,350	29,180	27,500	-830	+ 850
Contract Construction	1,690	1,700	1,850	- 10	- 160
Transp.-Utilities	1,770	1,740	1,780	+ 30	- 10
Trade	9,220	9,270	8,860	- 50	+ 360
Finance, Ins. & Real Estate	1,300	1,300	1,270	0	+ 30
Service & Miscellaneous	6,970	6,910	6,610	+ 60	+ 360
Government	7,400	8,260	7,130	-860	+ 270
Federal	1,490	1,430	1,400	+ 60	+ 90
State & Local Education	3,220	4,200	2,980	-980	+ 240
Other	2,690	2,630	2,750	+ 60	- 60
Labor-Management Disputes	0	0	0	0	0

LOCAL APPLICANT PROFILES

Following are summaries of qualifications of some of the applicants available through the Medford Local Office. If any of these applicants meet your needs, please call us at 776-6060.

Secretary/Accounting Clerk

Experienced as a purchasing and administrative secretary. Shorthand 100+ wpm, typing 75+ wpm, 10 key, PBX, and general accounting knowledge. Applicant has worked part-time for three years as an insurance secretary.

(over)

Cashier-Checker (Youth)

High school graduate interested in training for grocery cashier. Applicant has had previous experience working in a store as a bagger.

Surgical Tech (Veteran)

Certified Operating Room Technician with a total of three years experience in surgery, 15 months of which has been local. Applicant has worked with maintaining supplies and equipment stock and preparation of instruments for surgery.

Electronics Technician (Veteran)

An individual with over six years of diversified technical experience in the electronics field; possesses a First Class FCC License with radar endorsement; C.E.T. license; Associate of Science degree; local reference. This applicant's experience ranges from installation, maintenance and repair of radio and related equipment and repair and calibration of audiometric and other medical electronic equipment.

Administrative Assistant

Applicant has well rounded experience in a variety of office duties, including Executive Secretary, receptionist, bookkeeper, employment counselor and loan officer, all of which range from 12 months on the job or more. Applicant has attended business school, American Institute of Banking, and an adult education school.

Commercial Drafter

Senior Draftsman, drafting construction drawings, schematics and assisting engineers in other tasks. Fully experienced in general office duties and machines.

NOTES:

What is the MEDIHC program? MEDIHC means Military Experience Directed into Health Careers; a program sponsored by the Department of Health Education and Welfare. The program assists veterans, with or without health career experience, who want to pursue a health career. One feature of MEDIHC is the Profile Roster. It is prepared and mailed to over 500 health employers in Oregon and it includes the individual's experience, training and interests. The roster provides a system for applicant qualifications to be brought to the attention of many health employers simultaneously. Call 776-6060 if this program could possibly help you.

HOURS AND EARNINGS

Average weekly earnings for Jackson County's manufacturing production workers increased sharply from $237.34 in May to $264.58 in June. Earnings were substantially above the $234.77 rate estimated for June 1975. Three factors contributed to the large increase in weekly earnings: more overtime at premium rates, higher wage rates paid by certain firms, and the inclusion of vacation hours and vacation pay in some of the hours and earnings data. These factors are reflected in the increase in the length of the average workweek from 39.1 hours in May to 42.4 hours in June. The rise in average hourly earnings from $6.07 per hour in May to an all-time high of $6.24 per hour in June also show the results of these factors.

All of the increases in hours and earnings estimates occurred in the durable goods manufacturing sector. Average weekly earnings in nondurable goods manufacturing actually fell from $218.66 in May to $196.74 in June because of seasonal decreases in both average weekly hours (38.7 hours to 36.5 hours) and average hourly earnings ($5.65 per hour to $5.39 per hour).

(over)

AVERAGE HOURS AND EARNINGS OF JACKSON COUNTY MANUFACTURING PRODUCTION WORKERS 1/

	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	Jun 76 2/	May 76 3/	Jun 75	Jun 76 2/	May 76 3/	Jun 75	Jun 76 2/	May 76 3/	Jun 75
TOTAL MANUFACTURING	$264.58	$237.34	$234.77	42.4	39.1	41.7	$6.24	$6.07	$5.63
Durable Goods	271.76	239.51	239.13	43.0	39.2	42.1	6.32	6.11	5.68
Lumber & Wood Products	276.66	241.86	244.82	43.5	39.2	42.8	6.36	6.17	5.72
Logging & Sawmills	293.23	270.48	273.94	43.7	39.2	43.9	6.71	6.90	6.24
Veneer & Plywood	303.70	256.40	252.86	44.4	40.0	43.9	6.84	6.41	5.76
Other Wood Products	192.35	169.50	176.33	41.1	37.5	38.5	4.68	4.52	4.58
Other Durable Goods	230.89	218.44	191.05	39.2	38.8	36.6	5.89	5.63	5.22
Nondurable Goods	196.74	218.66	199.64	36.5	38.7	38.1	5.39	5.65	5.24
Food & Kindred Products	193.44	216.84	193.05	33.7	35.9	35.1	5.74	6.04	5.50
Other Nondurable Goods	198.36	219.49	203.66	38.0	40.2	39.7	5.22	5.46	5.13

1/ Average hours and earnings figures are for production workers only and exclude administrative, supervisory, sales, technical, and office personnel. Earnings figures include premium pay for overtime and shift differentials.
2/ Preliminary
3/ Revised

ASSESSMENT OF DRAFT ENVIRONMENTAL IMPACT STATEMENT: PACIFIC POWER AND LIGHT COMPANY PROPOSED 500 KV POWERLINE, MIDPOINT, IDAHO-MEDFORD, OREGON

I. Introduction

The purpose of this report is to provide Pacific Power and Light Company (PP&L) an assessment of the draft Environmental Impact Statement (DEIS) on the proposed PP&L 500 KV transmission line from Midpoint, Idaho to Medford, Oregon. Emphasis in this report will be directed to the eastern portion of the route, from Midpoint to Malin Oregon.

In general, the DEIS is well written and documented. The data base utilized in the DEIS is considered to be adequate and accurate. Three areas of concern, however, have been identified during this evaluation. These concerns do not reflect inadequacies or inaccuracies in the DEIS, but involve the methodology utilized for the determination of environmental impacts, the selection of alternative routes and the comparison of alternative routes.

The following portions of this report will describe, in the form of constructive criticism, the three areas of concern, and suggest modification to the methodologies used during BLM's environmental analysis. VTN hopes that the suggestions presented in this report will allow for a realistic evaluation of the proposed project.

II. Impact Evaluation

The following section presents a summary of the major impacts delimited in Chapters V and VIII (Unavoidable Adverse Impacts and Alternatives to the Proposed Project) of the DEIS, and VTN's suggestions for modifications to the impact evaluation methodology where applicable.

A. Climate

No adverse impacts are predicted.

B. Air Quality

The predicted impacts to air quality are dust and vehicular pollutants generated during construction. In addition, if slash and other debris are burned, considerable atmospheric pollution from particulates/aerosols would occur. These are short-term impacts. The DEIS states that the proposed project will not change existing air quality. VTN considers that the addition of pollutants to an air shed is an adverse impact, whether over short or long-term. The degree

of impact would depend on the duration of construction activities, and, to some extent, on the proximity and number of communities within the construction area. In comparing impacts of the alternative routes, the length of the route and the number and proximity of communities to the various routes must be considered.

C. Geology and Topography

The DEIS states that there will be no impacts on geology or topography. Geology and topography will affect the transmission line, in terms of engineering, construction costs, and accessibility. In addition, the interrelationships between the location of the line and topography will affect erosion, aesthetics and water quality. The routes selected for analysis during VTN's Prime Route Selection Study were located to minimize this impact.

D. Mineral Resources

No adverse impacts are predicted. It should be noted, however, that there are several areas along the routes containing potentially exploitable commercial quality geothermal resources. If these resources are utilized in the future for the production of electricity, a power transmission line would be required. The corridor proposed by PP&L could be used, thus minimizing the impact of future proposals.

E. Soils

The primary soils impacts indicated in the DEIS pertain to compaction, increased erosion, and the creation of conditions conducive to landsliding. The analysis emphasized the soil loss that will be caused by the project.

F. Water Resources

The primary impact addressed in the DEIS is the degredation of water quality due to increased sedimentation. The DEIS also states that adverse impacts will be cause to streams at crossing points, and to water resources in general by the introduction of contaminates other than sediment. Water consumption attributed to the project will also be an adverse impact.

G. Noise

Noise is not considered to be an adverse impact in the DEIS. Construction activities would account for the greatest potential noise impact. This impact would depend on the proximity of communities and individual dwelling to the construction activity. VTN suggests a more in-depth analysis of the construction noise impact, considering the closeness of dwellings to the proposed route and the alternatives. Construction noise generally ranges between 70 and 105dBA (at 50 feet). Normal attenuation of noise

from a point source is 6dB per doubled distance. Noise levels of 70 - 105dBA at 50 feet would therefore be attenuated by distance to 40 - 75dBA at about 1/4 mile. A 75 dBA level would be in violation of most noise standards. It is assumed that the route passing the largest number of communities and dwellings would have the greatest impact.

H. Vegetation

The major impact to vegetation will result from its removal. The primary effect of vegetation removal will be upon other environmental parameters. There will be an increase in erosion potential and possible degredation of water quality, and a reduction in wildlife habitat. Other potential impacts are to aesthetics, rare and endangered plant species, and an increase in potential fire hazard.

I. Wildlife

The impacts to wildlife are directed toward habitat alterations, disturbance by the corona effect, siltation of water bodies, and bird collisions with the powerline and towers. In determing the acreage of habitat affected, the primary factor is increased access along the route, resulting in increased hunting (both legal and illegal). Existing access along the various routes was not taken into account, thus, the total indirect impact to wildlife is considered by VTN to be overestimated. It is suggested that the number of animals effected by the project also be emphasized due to the differing herd sizes and the capacity of various areas to support wildlife.

J. Archaeological/Historical Sites

Archaeological resources are not quantified in the DEIS. VTN's Primary Route Selection Study did take into account known archaeological resources. Routes were selected for study that would avoid these resources where possible.

There will be no physical impact to any historical resources by the proposed project. The impacts evaluated in the DEIS are visual in nature, and should be included in the aesthetics section.

K. Land Use

The primary impacts to land use will be losses to grazing, forestry and agricultural lands, and employment losses caused by decreased timber production. The analysis of loss of grazing land emphasizes AUM's. It is suggested that analysis also include an evaluation of the capacity of various areas to support different kinds of animals. This data, plus knowledge of the number of animals involved, may provide a more meaningful assessment.

The values of lands affected by the proposed routes could also be estimated to provide a broader data base.

L. Transportation

The DEIS states that there will be no long-term impacts to the transportation network. Increased road use will be a short-term impact.

M. Aesthetics and Recreation

The impacts to aesthetics and recreation primarily involve possible decreased utilization because of the transmission line's visual intrusion. In addition, future studies on potential roadless areas would be affected by the line. Potential increased public access is also considered to be adverse, but is not balanced by an evaluation of existing access along the routes.

N. Socioeconomic Conditions

Socioeconomic impacts involve the possibility of aircraft collisions with the line, a decrease in land values, and effects on communities. It is suggested that pre and post construction land values along other powerlines be determined in order to varify and quantify this impact. The value of the land would be determined by formal land use and the attitudes of individual or agency "owners".

The community impacts, as stated in the DEIS, would involve the use of housing, and the increase in retail business and services. It is problematical whether or not this impact should be considered adverse. Many of the communities in the area are oriented to short-term influxes of population during the year. Lakeview, for example, provides goods, services and accommodations for several thousand hunters and tourists annually (5000 - 6000 hunters during "the season", and 100 - 200 tourist couples per week - Personnal Communication, Lakeview Chamber of Commerce., 9/17/76).

III. Alternative Route Selection

The alternate routes selected for evaluation in the DEIS are, for the most part, viable and realistic. The alternatives approximate routes investigated by VTN during the Primary Route Selection Study. There are certain deviations between the DEIS alternative routes and those studied previously by VTN that cause some concern. The major question involves the Catlow-Sycan Flat segments of alternates II and IV. A similar route was studies by VTN, but the route was eliminated following discussions with local Forest Service and BLM personnel. The main concerns involved the Summer Lake - Winter Rim area, the Slide Mountain Geologic Study area, roadless study areas in the Fremont National Forest and the National Forest itself. Forest Service and BLM staff members indicated a route in this area should proceed north of Summer Lake.

Assuming the Catlow-Sycan Flat segment could be adjusted, the alternate route segments would be approximately the same as those previously studied by VTN. The following five Tables show the raw scores by segment for the proposed route and the four alternates for the following categories: Land Economics; Land Use; Ecology; Engineering; and Aesthetics. The raw scores are normalized in order to present a balanced method of comparison (See Prime Route Selection Study for a description of this methodology and the parameters included in each of the main categories). Table 6 shows a comparison of the normalized scores by route.

TABLE 1

Land Economics-Segment Scores
(VTN Route Study Data)

SEGMENTS	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
A	-	193	-	193	193
B	-	676	-	676	676
C	-	-	-	-	-
D	512	-	512	-	-
E	-	28	-	-	-
F	-	-	-	24	24
G	7	-	7	-	-
H	-	-	-	-	-
I	22	-	22	-	-
J	-	-	-	-	-
K	-	8	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
O	-	-	-	16	16
P	9	-	9	-	-
Q	-	82	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	12	-	12	12	12
U	-	-	-	-	-
V	-	-	-	-	-
W	56	-	56	56	56
X	-	-	136	-	136
Y	22	-	-	22	-
Z	-	-	-	-	-
AA	-	259	-	-	-
BB	-	125	125	-	125
CC	-	-	-	-	-
DD	-	-	-	37	-
EE	61	-	-	-	-
FF	-	-	-	-	-
GG	-	354	354	-	354
HH	87	-	-	87	-
II	-	-	-	-	-
JJ	84	84	84	84	84
KK	-	-	-	17	-
Total Raw Score	872	1809	1317	1224	1676
Normalized Score	48.2	100	72.8	67.7	92.6

TABLE 2

Land Use-Segment Scores
(VTN Route Study Data)

SEGMENTS	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
A	-	69.1	-	69.1	69.1
B	-	89.5	-	89.5	89.5
C	-	-	-	-	-
D	100.8	-	100.8	-	-
E	-	70.9	-	-	-
F	-	-	-	84.6	84.6
G	82.8	-	82.8	-	-
H	-	-	-	-	-
I	66.9	-	66.9	-	-
J	-	-	-	-	-
K	-	23.3	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
O	-	-	-	52.6	52.6
P	24.9	-	24.9	-	-
Q	-	146.8	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	70.1	-	70.1	70.1	70.1
U	-	-	-	-	-
V	-	-	-	-	-
W	49.9	-	49.9	49.9	49.9
X	-	-	78.4	-	78.4
Y	22.9	-	-	22.9	-
Z	-	-	-	-	-
AA	-	71.0	-	-	-
BB	-	38.5	38.5	-	38.5
CC	-	-	-	-	-
DD	-	-	-	63.9	-
EE	87.9	-	-	-	-
FF	-	-	-	-	-
GG	-	123.8	123.8	-	123.8
HH	79.6	-	-	79.6	-
II	-	-	-	-	-
JJ	48.7	48.7	48.7	48.7	48.7
KK	-	-	-	18.5	-
Total Raw Score	634.5	681.6	684.8	649.4	705.1
Normalized Score	90.0	96.6	97.1	92.1	100

TABLE 3

Geology-Segment Scores
(VTN Route Study Data)

SEGMENTS	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
A	-	11.8	-	11.8	11.8
B	-	13.0	-	13.0	13.0
C	-	-	-	-	-
D	7.6	-	7.6	7.6	-
E	-	3.0	-	-	-
F	-	-	-	1.0	1.0
G	8.2	-	8.2	-	-
H	-	-	-	-	-
I	6.4	-	6.4	-	-
J	-	-	-	-	-
K	-	2.2	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
O	-	-	-	2.0	2.0
P	4.6	-	4.6	-	-
Q	-	4.5	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	4.2	-	4.2	4.2	4.2
U	-	-	-	-	-
V	-	-	-	-	-
W	14.4	-	14.4	14.4	14.4
X	-	-	3.9	-	3.9
Y	0.0	-	-	0.0	-
Z	-	-	-	-	-
AA	-	8.0	-	-	-
BB	-	6.2	6.2	-	6.2
CC	-	-	-	-	-
DD	-	-	-	6.6	-
EE	5.4	-	-	-	-
FF	-	-	-	-	-
GG	-	3.4	3.4	-	3.4
HH	0.0	-	-	0.0	-
II	-	-	-	-	-
JJ	2.4	2.4	2.4	2.4	2.4
KK	-	-	-	2.9	-
Total Raw Score	53.2	54.5	61.3	58.3	62.3
Normalized Score	85.4	87.5	98.4	93.6	100

TABLE 4

Engineering-Segment Scores
(VTN Route Study Data)

SEGMENTS	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
A	-	3805.0	-	3805.0	3805.0
B	-	6821.2	-	6821.2	6821.2
C	-	-	-	-	-
D	6432.3	-	6432.3	-	-
E	-	8434.5	-	-	-
F	-	-	-	7421.0	7421.0
G	3957.7	-	3957.7	-	-
H	-	-	-	-	-
I	4738.3	-	4738.3	-	-
J	-	-	-	-	-
K	-	2897.3	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
O	-	-	-	5877.2	5877.2
P	3097.2	-	3097.2	-	-
Q	-	11237.6	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	4939.7	-	4939.7	4939.7	4939.7
U	-	-	-	-	-
V	-	-	-	-	-
W	4915.3	-	4915.3	4915.3	4915.3
X	-	-	7967.7	-	7967.7
Y	2847.2	-	-	2847.2	-
Z	-	-	-	-	-
AA	-	5345.2	-	-	-
BB	-	2406.0	2406.0	-	2406.0
CC	-	-	-	-	-
DD	-	-	-	4124.5	-
EE	8051.3	-	-	-	-
FF	-	-	-	-	-
GG	-	9613.4	9613.4	-	9613.4
HH	7872.7	-	-	7872.7	-
II	-	-	-	-	-
JJ	3539.8	3539.8	3539.8	3539.8	3539.8
KK	-	-	-	2331.1	-
Total Raw Score	50391.5	54100.0	51607.4	54494.7	57306.3
Normalized Score	87.9	94.4	90.0	95.1	100

TABLE 5

Aesthetics-Segment Scores
(VTN Route Study Data)

SEGMENTS	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
A	-	0.0	-	0.0	0.0
B	-	0.0	-	0.0	0.0
C	-	-	-	-	-
D	98.9	-	98.9	-	-
E	-	153.3	-	-	-
F	-	-	-	73.1	73.1
G	132.9	-	132.9	-	-
H	-	-	-	-	-
I	159.2	-	159.2	-	-
J	-	-	-	-	-
K	-	58.5	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
O	-	-	-	105.9	105.9
P	45.8	-	45.8	-	-
Q	-	129.2	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	0.0	-	0.0	0.0	0.0
U	-	-	-	-	-
V	-	-	-	-	-
W	92.4	-	92.4	92.4	92.4
X	-	-	152.1	-	152.1
Y	103.1	-	-	103.1	-
Z	-	-	-	-	-
AA	-	130.0	-	-	-
BB	-	91.8	91.8	-	91.8
CC	-	-	-	-	-
DD	-	-	-	60.0	-
EE	124.4	-	-	-	-
FF	-	-	-	-	-
GG	-	0.0	0.0	-	0.0
HH	169.9	-	-	169.9	-
II	-	-	-	-	-
JJ	0.0	0.0	0.0	0.0	0.0
KK	-	-	-	51.4	-
Total Raw Score	926.6	562.8	773.1	655.8	515.3
Normalized Score	100	60.7	83.4	70.8	55.6

TABLE 6

Comparison of Normalized Scores by Route
(VTN Route Study Data)

CATEGORY	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
Land Econ.	48.2	100.0	72.8	67.7	92.6
Land Use	90.0	96.6	97.1	92.1	100.0
Ecology	85.4	87.5	98.4	93.6	100.0
Engineering	87.9	94.4	90.0	95.1	100.0
Aesthetics	100.0	60.7	83.4	70.8	55.6
Total	411.5	439.2	441.7	419.3	448.2

IV. Comparison of Alternate Routes

A prime concern about the DEIS involves the methodology utilized to compare the proposed route and the Alternate Routes. The summary portion of Chapter VIII allows the comparison of the numbers (i.e. tons, acres, board feet etc.) of most of the pertinent environmental parameters by route. A comparison of the impacts on all environmental categories by route is shown on P. VIII-205 for Midpoint to Malin. This Table utilizes the ranking by route for each category and encourages a reader to add the rankings to determine the best route. The "amount" of impact is not taken into account, however, in the comparison. The route with the highest number of "firsts", however, may not be the route that causes the minimum overall environmental impact. The total wildlife rank was derived on page VIII-201. Alternates I and II are ranked 2 and 1, and 1 and 2 respectively in the antelope and new access categories; thus if these were the only wildlife subcategories, the two routes would be equal. Route II impacts 19,200 acres less of antelope habitat than route I, and causes new access in remote areas on 14,100 more acres than route I. Route II impacts 5,100 fewer acres than route I, but is considered equal when only ranking is considered. Route I is ranked first in vegetation impact, removing 67 acres and route II fourth affecting 73 acres. If rankings were added to wildlife and compared, route I would have four "points", and route II 7, thus route I would be best, although it impacted 5,094 more acres.

VTN recognizes the need for an overall system of comparison, but suggests a different methodology to achieve that comparison. It is suggested that the "scores" (tons, acres, AUM's, etc.) for each environmental parameter be normalized (with a 0 - 100 range) within that parameter. This would allow the environmental categories to be weighted equally and eliminate any dispute associated with various weighting systems. This procedure also allows for the evaluation of the relative ranking of both the categories and the alternative routes.

The following Tables apply this procedure to the proposed route and the four Alternate Routes evaluated in the DEIS. Data utilized in the Tables is that which appears in the DEIS. Table 7 indicates the amount of impact by the various routes on the environmental parameters. The raw score values shown in the preceding Table have been normalized (Table 8). The normalization process involves dividing each raw score within a category by the highest raw score in the category. The range within categories will be 0 - 100, thus allowing for the comparative evaluation among categories. Table 8 also shows the totals of normalized scores for each route. Table 8 provides a useful comparison of impacts for all environmental parameters and sub-categories of the parameters. In order to avoid the combination of any one routes total score by an environmental consideration containing several sub-categories, Table 8 combines the normalized scores for the four main sub-categories, direct habitat loss, indirect habitat loss, animals affected, and land economics/use. Table 9 and 10 provides normalized scores only for the environmental parameters.

TABLE 7

Environmental Impacts (DEIS Raw Score Values)
Midpoint to Malin

ENVIRONMENTAL PARAMETER	UNITS	VALUES PROPOSED ROUTE	ALTERNATE I	ALTERNATE II	ALTERNATE III	ALTERNATE IV
SOILS - Residual Soil Loss	Tons/Project	5268	14023	30280	15800	17746
WATER - Sediment Yield	Acre/Feet	1.31743	3.50575	7.57000	3.95000	4.43650
VEGETATION - Vegetation Loss	Acres	75	67	73	70	68
WILDLIFE -						
Direct Habitat Loss						
Deer Winter Range	Acres	15.6	11.8	11.0	6.4	1.8
Antelope Range	Acres	14.2	12.0	8.0	20.6	15.4
Wild Horse Range	Acres	1.2	0.4	0.6	4.7	4.2
Forest Wildlife	Acres	325	785	325	678	678
Indirect Habitat Loss						
Deer Winter Range	Acres	99800	69100	70400	34500	5100
Antelope Range	Acres	90900	76800	57600	131800	98500
Wild Horse Range	Acres	3800	1300	3800	26800	26800
Animals Affected						
Deer	Number	18000	16000	17000	8200*	6900*
Antelope	Number	1400*	1250	1200	2000	2000
Wild Horses	Number	40	150	260	540	800
Waterfowl	Number/Sites	9*	10*	10*	8*	8*
Raptors	Number/Sites	5*	4	7*	7*	8*
HISTORICAL SITES - Visual Impact	Value	16	6	17	13	13
RECREATION/AESTHETICS - Visual Impact	Value	50	53	55	42	49
REMOTE AREAS - New Access	Acres	52500	25600	39700	56400	43600

TABLE 7

Environmental Impacts (DEIS Raw Score Values)
Midpoint to Malin

ENVIRONMENTAL PARAMETER	UNITS	VALUES PROPOSED ROUTE	ALTERNATE I	ALTERNATE II	ALTERNATE III	ALTERNATE IV
LAND ECONOMICS/USE						
Range Lost	A.U.M.'s	6.4	4.1	6.3	4.9	4.8
Agriculture Lost	Acres	2.1	3.9	2.6	1.9	2.4
Forestry Production Lost	Board Feet	93	235	93	191	191
Forestry Jobs Lost	Man Years	25	60	25	50	50
Residential	Comparative	2	5	4	1	3
TOTAL SCORE		272348.8	205483.7	220885.1	277142.5	202547.0

* Values represent modification of typographical errors in the DEIS.

TABLE 8

Environmental Impacts (DEIS Normalized Scores)
Midpoint to Malin

ENVIRONMENTAL PARAMETER	UNITS	NORMALIZED VALUES PROPOSED ROUTE	ALTERNATE I	ALTERNATE II	ALTERNATE III	ALTERNATE IV
SOILS - Residual Soil Loss	Tons/Project	17	46	100	52	59
WATER - Sediment Yield	Acre/Feet	17	46	100	52	59
VEGETATION - Vegetation Loss	Acres	100	89	97	93	91
WILDLIFE -						
Direct Habitat Loss						
Deer Winter Range	Acres	100	76	71	41	12
Antelope Range	Acres	69	58	39	100	75
Wild Horse Range	Acres	26	9	13	100	89
Forest Wildlife	Acres	41	100	41	86	86
Indirect Habitat Loss						
Deer Winter Range	Acres	100	69	71	35	5
Antelope Range	Acres	69	58	44	100	75
Wild Horse Range	Acres	14	5	14	100	100
Animals Affected						
Deer	Number	100	89	94	46	38
Antelope	Number	70	63	60	100	100
Wild Horses	Number	5	19	33	68	100
Waterfowl	Number/Sites	90	100	100	80	80
Raptors	Number/Sites	63	50	88	88	100
HISTORICAL SITES - Visual Impact	Value	94	35	100	76	76
RECREATION/AESTHETICS - Visual Impact	Value	91	96	100	76	89
REMOTE AREAS - New Access	Acres	93	45	70	100	77

TABLE 8

Environmental Impacts (DEIS Normalized Scores)
Midpoint to Malin

ENVIRONMENTAL PARAMETER	UNITS	PROPOSED ROUTE	NORMALIZED VALUES ALTERNATE I	ALTERNATE II	ALTERNATE III	ALTERNATE IV
LAND ECONOMICS/USE						
Range Lost	A.U.M.'s	100	64	98	77	75
Agriculture Lost	Acres	54	100	67	49	62
Forestry Production Lost	Board Feet	40	100	40	81	81
Forestry Jobs Lost	Man Years	42	100	42	83	83
Residential	Comparative	40	100	80	20	60
TOTAL SCORE		1435	1516	1562	1703	1490

TABLE 9

Environmental Impacts (DEIS Normalized Scores by Sub-Category)
Midpoint to Malin

ENVIRONMENTAL PARAMETER	UNITS	NORMALIZED VALUES-PARAMETER SUB-CATEGORIES			
		PROPOSED ROUTE	ALTERNATE I	ALTERNATE II	ALTERNATE III	ALTERNATE IV
SOILS - Residual Soil Loss	Tons/Project	17	46	100	52	59
WATER - Sediment Yield	Acre/Feet	17	46	100	52	59
VEGETATION - Vegetation Loss	Acres	100	89	97	93	91
WILDLIFE - Direct Habitat Loss		44	100	43	88	86
			(Total Direct Habitat Loss Score)			
Indirect Habitat Loss		100	76	68	99	67
			(Total Indirect Habitat Loss Score)			
Animals Affected		100	90	95	55	50
			(Total Animals Affected Score)			
HISTORICAL SITES - Visual Impact	Value	94	35	100	76	76
RECREATION/AESTHETICS - Visual Impact	Value	91	96	100	76	89
REMOTE AREAS - New Access	Acres	93	45	70	100	77
LAND ECONOMICS/USE		42	100	43	81	81
			(Total Land Economics/Use Score)			
TOTAL SCORE		698	723	816	772	735

TABLE 10

Environmental Impacts (DEIS Normalized Scores by Category)
Midpoint to Malin

ENVIRONMENTAL PARAMETER	UNITS	PROPOSED ROUTE	NORMALIZED VALUES-MAJOR PARAMETERS ALTERNATE I	ALTERNATE II	ALTERNATE III	ALTERNATE IV
SOILS - Residual Soil Loss	Tons/Project	17	46	100	52	59
WATER - Sediment Yield	Acre/Feet	17	46	100	52	59
VEGETATION - Vegetation Loss	Acres	100	89	97	93	91
WILDLIFE - Direct Habitat Loss		100	77	70	95	66
			(Total Wildlife Score)			
HISTORICAL SITES - Visual Impact	Value					
RECREATION/AESTHETICS - Visual Impact	Value	92	82	100	76	86
			(Total Visual Score)			
REMOTE AREAS - New Access	Acres	93	45	70	100	77
LAND ECONOMICS/USE		42	100	43	81	81
			(Total Land Economics/Use Score)			
TOTAL SCORE		461	485	580	549	519

The summary of environmental impacts on Page VIII-205 includes total mileage and mileage of existing right-of-way as ranked components of the evaluation. VTN does not feel that the inclusion of mileage as a decision making category is viable. In addition, mileage has already been incorporated into the estimation of other impacts. In many cases, a shorter route does not generate less of an impact than a long one. For the purposes of evaluation, however, mileage has been included as an additional analysis factor (Table 11). The mileage of "existing parallel right-of-way" was subtracted from the total mileage of each route to obtain the "net" mileage of new right-of-way. The scores were normalized and added to the route scores on Tables 8, 9 and 10. The inclusion of this factor did not change the comparative ranking of the five routes.

TABLE 11

Environmental Impact (Net Mileage Adjustment)
Midpoint to Malin

	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
Net Mileage	351	289	314	337.5	300.5
Normalized Score	100	82	89	96	86
		Table 8 Adjustment			
Total Normalized Score	1435	1516	1562	1703	1490
Normalized Net Mileage	100	82	89	96	86
Total Score	1535	1598	1651	1799	1576
		Table 9 Adjustment			
Total Normalized Score	698	723	816	772	735
Normalized Net Mileage	100	82	89	96	86
Total Score	798	805	905	868	821
		Table 10 Adjustment			
Total Normalized Score	461	485	580	549	519
Normalized Net Mileage	100	82	89	96	86
Total Score	561	567	669	645	605

VTN also questions the rating of the environmental parameters importance to decision making (P.VIII-205). It is the feeling of VTN's Environmental Sciences staff that environmental considerations should be evaluated equally, and that economics is as important as aesthetics. The rating of wildlife as a more important decision making parameter than vegetation represents a "tunnel vision" approach that does not assess environmental interrelationships. Vegetation is a major component of wildlife habitat, and as such is probably the key factor influencing the presence of wildlife in an area. Vegetation should be at least of equal importance to wildlife as a decision making tool.

VTN hopes that this evaluation of the BLM's DEIS on the proposed project and our suggestions for methodological modifications will aid in the assessment of the proposed project. We feel that the Prime Route Selection Study introduced a valid method of selecting the proposed route. Over 50 potential route segments were originally assessed, and 37 segments were ultimately evaluated in the study area, which encompassed over 37,000 square miles. The elimination of some segments (such as that identified in the DEIS as the western portion of the Catlow-Sycan Flat segment) resulted from discussions with BLM and USFS personnel. We feel that the proposed route represents the route between Midpoint, Idaho and Malin, Oregon that causes the least total environmental impact. Table 12 shows a comparison of rankings of the proposed route and the four alternates as derived from the DEIS, VTN's Prime Route Selection Study data, environmental criteria, and methodology, and the data presented in the DEIS utilizing the suggested methodology.

TABLE 12

Comparison of Ranking of Alternative Routes
Midpoint to Malin

SOURCE	PROPOSED ROUTE	ALTERNATE ROUTES I	II	III	IV
DEIS	3	1	5	3	2
Prime Route Selection Study Data/Methodology (Table 6)	1	3	4	2	5
Table 8	1	3	4	5	2
Table 9	1	2	5	4	3
Table 10	1	2	5	4	3

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
16th Floor, 1220 S. W. Third, Portland, Oregon 97204

October 15, 1976

66

Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

Dear Sir:

We have reviewed your draft environmental statement concerning a proposed powerline between Midpoint, Idaho and Medford, Oregon and have no comments.

We appreciate the opportunity to review this draft.

Sincerely yours,

Acting
Guy W. Nutt
State Conservationist

cc:
Office of the Coordinator of Environmental Activities, Washington, D.C.
Administrator, SCS, Washington, D.C.
Chairman, Council on Environmental Quality, Washington, D.C. (5)

IDAHO DEPARTMENT of PARKS & RECREATION

Statehouse Mail 2263 Warm Springs Ave. Boise Idaho 83720 (208) 384 - 2154

R. P. Peterson, Acting Director

Cecil D. Andrus, Governor

RECEIVED
BUREAU OF
LAND MANAGEMENT

OCT 25 1 00 PM '75

STATE OFFICE
PORTLAND, OREGON

October 15, 1976

73

Mr. Murl W. Storms
Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, OR 97208

Re. - (540.22.2) Pacific Power & Light 500 KV Power Line Proposal

Dear Sir:

We appreciate the opportunity to review the Draft Environmental Impact Statement of the Pacific Power & Light Company proposed 500 KV power line route from Midpoint, Idaho to Medford, Oregon. We will make our comments relative to our State Comprehensive Outdoor Recreation Plan and the recreation resources that will be affected by the proposed route.

It would seem that with the ever diminishing supply of recreation resources within the United States, and specifically Idaho, that the withdrawal of still more space, especially in an area that has been relatively undeveloped, would not be in the best interests of the people of the United States and the citizens of the State of Idaho. Outdoor recreation resources are at a premium and value will be placed at a much higher level in the years to come for these resources. The area to be crossed by the proposed power line is a resource that needs to be left intact.

In the evaluation of the development of such a power line, the aesthetic values upon the recreation resources are perhaps the most important. Realizing that beauty is generally in the "eye of the beholder", it is very difficult to quantify the value of scenics. Although the BLM did try to use the Forest Service Visual Management System to quantify scenics, we do feel that perhaps the scenic values were not analyzed to the depth needed in the final evaluation given to the recreation resources.

To apply the U. S. Forest Service Visual Management System on BLM lands may be like comparing apples and oranges. The lands administered by BLM are unique in their own right and should be considered for that uniqueness. That uniqueness should be evident in the rating system and, at present, is not.

To emphasize the importance of aesthetics, we would like to evaluate the recreation resources along each segment along the proposed route:

Midpoint to Hagerman Segment - Realizing that there is an already existing 230 KV line, aesthetic impact has already been placed upon this particular segment; however, the addition of 120 ft. towers to those that already exist will further detract from the recreation resources along this segment. For example, 120 ft. towers would be visible from Malad Gorge State Park, which is a mile and a quarter away. This visibility will detract from the experiences of users at this State Natural Park. It would also pass immediately adjacent to Lower Swan Falls picnic and boat launching recreation area and the visual impact would be felt at this facility also.

Hagerman to Owyhee Junction - This segment basically parallels the Snake River for several miles. The proposed route will pass approximately three (3) miles south of Three Island State Historical Park. On clear days this line can be seen by visitors and will thus have an impact on visual sensitivity of those park users. Even more importantly, is that for approximately two miles the proposed route will be situated almost on top of the Oregon Trail, a highly unique national resource, which is being proposed as a part of the National Historical Trails System. This will detract from the experience for many users of this national trail, if it is approved. The Oregon Trail is one of Idaho's and the nation's most important historical trails and has been designated as such by the State Historical Society and recognized nationally for its importance.

The line crosses very close to the southeast corner of Bruneau Dunes State Natural Park and an intrusion into this natural setting will be most detrimental. This park is unique in that it is the only one of its type in the United States and has received national recognition because its landscape is similar to that of the planet Mars and for this reason was studied by N.A.S.A. It should be noted that placing 120 ft. towers just outside the park boundaries will destroy the experience of the park users.

The proposed route would pass through the Owyhee Mountains which has some of the highest scenic values within southwest Idaho. The 120 ft. towers and the attached lines would have a definite adverse impact on the visual experience for the majority of the users of this area. Basically, the high desert country of the Owyhee Mountains consists of picturesque juniper-covered mountains with canyons that provide a diversity of scenic vistas to the users. An intrusion of the nature planned by Pacific Power & Light would positively detract from the back country and wilderness characteristics of this particular segment. It should be noted that several areas along this proposed route have been designated as back country study areas and therefore should be taken into consideration.

Our experience with the Owyhee Mountains has shown that the scenic values are much greater than those classified by the system used for the purpose of this environmental impact statement. We would suggest that the scenics be reevaluated and reclassified. We would suggest that perhaps a different method be used rather than using vertical aerial photographs. In conjunction with vertical photographs, we would suggest that stereo obliques be used from groups observer positions along the route. Such perspectives should include being below, at the same level as, or above the visual objective. These viewing positions are generally referred to as inferior, observer normal, and observer superior, respectively. We feel that this methodology would offer greater value for scenic evaluation purposes.

In recognizing that one of the determinates used in the Forest Service Visual Management System is the number of people who view a particular landscape, that perhaps a projection should be considered of the number of people that will be using these particular areas over the next 30, 40 and 50 years. Using future projections, we feel that a more accurate representation of use will show in the scenic classification rating since use will increase.

In 1975, our department, through contract to Idaho State University, Department of Sociology, conducted a survey of Idahoan's outdoor recreation participation (copy enclosed). The study showed that pleasure driving (sightseeing) has approximately 16 million activity occasions per year in Idaho (pages 17 and 18). This use is projected to increase to approximately 32 million activity occasions per year by 2000.

We feel that the aesthetic resources offered by the Owyhee Mountains and the Owyhee Desert are very high quality in nature. We feel confident that if there was developed a quality classification system for a desert environment, the Owyhee Mountains and Desert would rank very high in visual appeal. Protection of this resource is paramount to meeting a large portion of Idaho's future outdoor recreation needs. In the Idaho State Comprehensive Outdoor Recreation Plan, recognition of the Owyhee quality as a high desert environment has been indicated. We feel very strongly that the intrusion of this proposed power line will detract substantially from the aesthetics of this quality environment.

In looking at the specific impacts upon recreational resources within the area, we would like to refer to the 1975 Outdoor Recreation Survey, which projects anticipated participation of citizens in 34 activities. Information in this document has been broken down by regions. As can be seen, Owyhee County makes up the largest portion of Region III (pages 25 and 26). We offer this chart as an indication of the demands that are going to be made on outdoor recreation resources in the future.

In summary, we are not in favor of the proposed route as suggested by the Pacific Power & Light Company. Our reasons are:

1. The intrusion of such a development into a basically undeveloped area is of an adverse nature which detracts substantially from the aesthetics of the area;

2. There exists other established corridors for power lines which could adequately serve as a location for this line;

3. That withdrawal of a substantial amount of new lands that need not be withdrawn would occur; and,

4. The existing impact upon developed recreational facilities would be substantial and irreversible.

We would hope that our comments have addressed our concern for the protection of quality recreation resources, and hopefully, will be some help as far as the final determination is concerned. We would hope that the BLM takes a greater look at other alternaitves including the designation of a power corridor for the location of this and all future power lines. We believe that one already exists and should be used.

Sincerely,

Kent Ellis

Kent Ellis, Administrator
State Recreation Division

cc: Office of the Governor
Ernie Day, Parks & Recreation Board Member
Shirl Boyce, Dir. State Planning & Community Affairs
William Matthews, Director, Idaho BLM
Maurice Lundy, Regional Director, Bureau of Outdoor Recreation
Merle Allison, Chairman, Parks & Recreation Board
Marty Morache, Fish & Game

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1500 N.E. IRVING STREET
P.O. BOX 3737
PORTLAND, OREGON 97208

TO : Oregon State Director
Bureau of Land Management
Portland, OR

October 19, 1976

FROM : Regional Director
Portland, OR

81

SUBJECT: Proposed routing of powerline.

We recently submitted our written comments on deficiency of the draft EIS regarding the proposed 500 KV transmission line from Midpoint, Idaho to Medford, Oregon; however, we want to reemphasize our opposition to routing this powerline through the Warner Valley and Klamath Basin waterfowl concentration areas.

In Illinois, landowners have been awarded compensation for damage sustained when powerlines disrupted normal waterfowl flight patterns that had been providing a source of income to the landowner through the sale of hunting privileges. This involved but a few thousand birds. Here in the Klamath Basin and Warner Valley we are dealing with several million birds, comprising a major portion of the entire Pacific Flyway. We strongly urge that the powerline be routed to avoid as a minimum, these two waterfowl concentration areas in Oregon.

We recognize that any route will have significant adverse impacts; however, a southern route through Northern California would avoid many of the concerns of the Fish and Wildlife Service and we believe, as a viable alternative it must be addressed publicly before a final routing is specified.

Also, regardless of site, we believe an important consideration in licensing should be to conduct the kind of studies--including long-term monitoring--that will help avoid future conflicts in siting facilities of this kind. We think this should be made a condition of either the ROW permit or the final certificate of need if the project is approved. Such studies could be cooperatively

CONSERVE AMERICA'S ENERGY

Save Energy and You Serve America!

funded by a consortium of State and Federal agencies and include the private sector as well. We would be pleased to work with you in developing this expertise.

We would appreciate your written response to these suggestions prior to adoption of the final environmental impact statement.

L. Kahle Mortensen

Regional Director

United States Department of the Interior

BUREAU OF MINES

EAST 315 MONTGOMERY AVENUE
SPOKANE, WASHINGTON 99207

Western Field Operation Center
October 21, 1976

82

Memorandum

To: Oregon State Director, Bureau of Land Management, Portland, Oregon

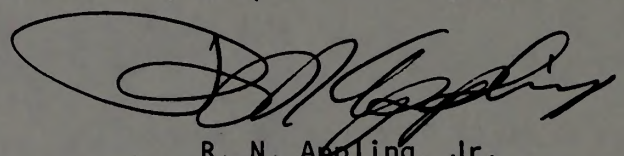
From: Chief, Western Field Operation Center

Subject: Review and Comments, Draft Environmental Impact Statement, Pacific Power and Light Company, Proposed 500 KV Powerline, Midpoint, Idaho, to Medford, Oregon (DES 76-32)

We have been requested to review the DES for Pacific Power and Light's proposed 500 KV powerline from Midpoint, Idaho, to Medford, Oregon, and forward our comments directly to your office. Our comments necessarily will pertain mainly to geology and mineral resources.

The DES appears to be comprehensive and well written, with scope and detail appropriate to the proposed action. We are pleased that geology and mineral resources have been given adequate consideration. The tabulated summary of geologic conditions along the proposed right-of-way (Table 2, page 11-12) is especially well suited to a project of this type. The table could be improved by the inclusion of more detail on the age and lithologic descriptions of the major rock types listed. Little extra effort or space in the DES would be required to include this information.

We concur with your conclusion that implementation of the project would have little or no detrimental impact on mineral resources. Nevertheless, we urge that the right-of-way across Federal lands remain open to mineral exploration and possible future development, with the stipulation that such activities must not interfere with operation of the transmission line. Mining and mineral processing industries which obtain their power through the Pacific Northwest intertie should benefit from the increased capacity which the proposed powerline would provide.



R. N. Appling, Jr.

COONS, COLE & ANDERSON
ATTORNEYS AT LAW
SOUTH PARK BUILDING
101 E. BROADWAY, SUITE 303
EUGENE, OREGON 97401

AREA CODE 503
TELEPHONE 485-0203

ALLAN H. COONS
HUGH K. COLE, JR.
BRUCE H. ANDERSON
LAWRENCE R. YOUNG
Stephen C. Thompson

October 14, 1976

86

Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

Re: Comments on DEIS, Proposed PP&L 500 KV Power Line, Midpoint, Idaho to Medford, Oregon, as the DEIS Applies to Waterfowl in the Klamath Basin

Gentlemen:

The following comments are prepared on behalf of the following groups and individuals:

1. The National Audubon Society
   950 Third Avenue
   New York, N.Y. 10022

2. The Izaak Walton League of America, Inc.
   800 N. Kent St., Suite 806
   Arlington, VA 22209

3. Defenders of Wildlife
   1244 - 19th Street, N.W.
   Washington, D.C. 20036

4. Mr. Thomas A. Roster
   5241 Bryant Avenue
   Klamath Falls, OR 97601

The comments are submitted on behalf of the above-named organizations, acting on behalf of themselves and their chapters and the members thereof, both within and outside the state of Oregon, and on behalf of Mr. Roster. For brevity purposes, the words "clients" will be used throughout these comments to refer to all of the foregoing.

With regard to waterfowl in the Klamath Basin area of Oregon, the Draft Environmental Impact Statement (hereinafter DEIS) fails to address adequately the potentially serious adverse impact that the proposed line might have upon such waterfowl, and, in addition, fails to discuss adequately alternative routes and mitigation measures that could substantially lessen that impact. The particular waterfowl phenomenon upon which the adverse impact is most

likely to be felt is the "feeding flights" of waterfowl that originate in the Klamath Basin National Wildlife Refuge, which such feeding flights are hereinafter in this letter more particularly described. Furthermore, there is noticeably absent the necessary description of the Klamath Basin, from a geographic and natural habitat standpoint, that would allow the responsible federal official to understand the important interrelationship of agricultural land, marsh land and wildlife refuge. In other words, it is impossible to understand the important geographic setting and limitations for waterfowl flight in the Klamath Basin, as well as the waterfowl use problems that have developed due to the land use patterns there, by reading the DEIS. In order to remedy these defects, several areas of the DEIS need to be completely rewritten, in particular, portions of Chapter II, Description of the Environment.

The previous paragraph is by way of summary of the criticisms more specifically set forth in the remainder of this letter.

I. SPECIFIC FEEDING FLIGHT PHENOMENON IN QUESTION AND ADVERSE IMPACTS THEREON.

The Klamath Basin in Oregon is situated, more or less, on an approximately north and south line, while Pacific Power and Light Company's (hereinafter PP&L) primary proposed route for the 500 KV line crosses the Klamath Basin in an east-west direction, approximately one (1) mile north of and parallel to Township Road. At the point PP&L's proposed route crosses the Basin, natural geographic features on the east and west sides of the Basin have restricted the width of the Basin to approximately seven (7) miles. BLM alternate route II also crosses the Klamath Basin, approximately two (2) miles north of PP&L's proposed primary route. Below these routes, Lower Klamath NWR, a part of the Klamath Basin NWR's, occupies the southern section of the Basin. The Klamath Basin National Wildlife Refuges consist of five (5) separate refuges which together serve as a part-time winter residence and migration stopover point for up to five million waterfowl a year. Klamath Lake also occupies a significant land area within the Klamath Basin. A substantial portion of the non-lake remainder of the Basin is extensively farmed, with forage and grain crops predominating. PP&L's proposed primary route passes through the southern portion of these agricultural lands within the Basin, and the BLM alternate route II passes through the middle of these lands. Where the PP&L proposed route and the BLM alternate route II cross the Klamath Basin both the agricultural lands and the adjacent refuge lands are flat and treeless, with no natural obstructions that would either shield the proposed transmission line from sight or make ducks rise to higher flight elevations than they would normally occupy when flying over flat terrain.

The DEIS fails to clearly identify or comment on the existence within the Klamath Basin of a unique waterfowl phenomenon, the

"feeding flight." A waterfowl feeding flight can be defined as one which is local in nature, relatively low in altitude and elevation, and pursued by waterfowl for the purpose of ingestion of food. A feeding flight originates at a resting area and terminates at a feeding area and vice versa. Within the Klamath Basin, by far the largest and most important feeding flight is the one that at least once in each 24-hour period traverses the flight corridor between the Lower Klamath Wildlife Refuge portion (almost all of which is located in the state of California) of the Klamath Basin National Wildlife Refuges and the agricultural grain fields which lie in Southern Oregon, some five to seven miles to the north of the Lower Klamath Refuge. This feeding flight is hereinafter in this letter referred to as the "Lower Klamath feeding flight." The bulk of this flight originates in the Lower Klamath Wildlife Refuge (the resting area) and terminates in the grain fields to the north (the feeding area), to the south of Midland and north of Township Road, principally in the area known as Tulana Farms. A return flight to the resting area (the Lower Klamath Wildlife Refuge) is usually made within 12 hours of the initial flight.

The Lower Klamath feeding flight numbers from a minimum of 30,000 waterfowl to a maximum of approximately 800,000 waterfowl. These numbers of birds (30,000 to 800,000) travel the feeding flight route at least once each day. This feeding flight phenomenon should not be confused with the DEIS reference to some five million plus waterfowl that pass through the Klamath Basin at the peak of each fall's migration (DEIS, p. II-105). The Lower Klamath feeding flight is made up of waterfowl that are at any given time resting within the Lower Klamath National Wildlife Refuge, and that is the primary reason that the feeding flight varies so much in numbers from one portion of the waterfowl season to the next. The particular feeding flight in question consists principally of ducks found in the Klamath Basin area, with pintails averaging approximately 60 per cent and mallards 30 per cent of the total number of birds in the flight.

In all of North America, the Lower Klamath feeding flight is one of the most unique and important in terms of magnitude and regularity. It is reported to be the largest feeding flight of ducks utilizing a refuge in the continental United States. The flight takes place early in the morning and from late afternoon to early evening. Briefly, the morning feeding flight takes place between 45 minutes and 15 minutes prior to sunrise. In recent years, the bulk of the ducks in the morning flight (approximately 80 per cent of the morning flight of ducks) leaves the grain fields north of Township Road and returns to the Lower Klamath National Wildlife Refuge. In the evening, from approximately one and one-half (1-1/2) hours prior to sunset until 50 minutes after sunset, the birds leave the Lower Klamath National Wildlife Refuge in Northern California and fly north into Oregon where the ducks land in the grain fields and feed. They usually remain there until

slightly before sunrise, when they leave to return to the Lower Klamath Refuge as above described. It should be noted that at times large numbers of the birds that have traveled the feeding flight corridor from the Lower Klamath Refuge remain in the farm fields feeding or resting (staging), especially when those fields are flooded, for several days before returning to the Lower Klamath Refuge. This is one reason for the great disparity of numbers (30,000 to 800,000) in the number of ducks that will be using the feeding flight corridor in any given day.

The height of the feeding flights varies according to the distance that the flight is traveling, the amount of remaining light, the range of visibility, the air turbulence caused by winds, rain, snow and/or sleet, and, to a limited extent, the interference by man (principally hunter activity). During good weather (clear skies, and little wind), the bulk of the birds (80 per cent or more) rise to fly in a corridor 150-250 yeards above the ground. The angle of rise from ground level to this corridor is much steeper during good weather than at any other time; normally, the birds achieve a height of 100 yards or greater within one-eighth to one-quarter (1/8-1/4) of a mile of horizontal distance.

On days of low turbulence and low light (overcast skies) ducks within this feeding flight rise to a flight corridor of 100-200 yards altitude. Not only is the corridor closer to the ground, but the angle of ascent is more gradual, and by and large, one-quarter (1/4) mile is covered before the height of 100 yards is attained.

During periods of low visibility and heavy air turbulence, the feeding flight passes through a corridor 40-120 yards above the ground. It is not unusual to see the bulk of the feeding flight between the Lower Klamath Refuge and the grain fields to the north, when the birds must fly against a wind of 20 mph or greater, and especially when snow or sleet is also present, flying at a height of 40 yards to 90 yards in the air. During heavy true fogs, or rising ground fogs, that flying corridor often lowers to 30 to 60 yards above the ground. Concomitantly, the angle of ascent is the most gradual of all during these weather conditions. As much as one-half mile of horizontal travel is often needed before the birds attain these flight corridors.

Finally, it is during the last 10 minutes of the evening flight (from 30-50 minutes after sunset) that the birds always fly the lowest. This low flying takes place regardless of the weather, but it is more common during good weather conditions for the flight tends to take place later due to the lingering light. To the man on the street, the quality of the light of these 10 minutes could best be described as <u>almost pitch black</u>. As a general rule, the heaviest volume of birds of the evening flight fly at this time and at a mere 20-50 yards off the ground. This is especially prevelent in the area from Township Road and to the north for a distance of three to four miles. This flight is little known to even intrepid birdwatchers and waterfowl hunters, as first, it takes place after shooting hours when

most hunters have left, and secondly, the birds are barely discernable against the dark backgrounds of the surrounding hills in such low light. In addition, the birds fly without uttering a sound. Only by standing directly under their flight lane, which may be as narrow as 200 yards wide, are the birds observable. This remarkable phenomenon (i.e., late portion of the evening feeding flight) includes both the heavy volume and extreme lowness of the flight. In addition, it should be understood that only on about 60 out of the 90 days of the waterfowl hunting season will there be a large enough number of ducks traveling the feeding flight corridor that the feeding flight phenomenon can be said to be occurring. Some of the reasons for the absence of the phenomenon on certain days (for example, ducks remaining in the flooded farm fields to feed and rest for several days or greatly reduced flight activity due to very extreme weather conditions) have been commented on in other portions of this letter.

In summary, the portion of the Lower Klamath feeding flight that we are most concerned about is that substantial portion that occurs during darkness and/or inclement weather where the marginal weather conditions greatly reduce visibility but do not prevent substantial numbers of the ducks from flying.

The proposed prime route of the 500 KV line and the alternate route II would be in direct conflict with the twice daily feeding flights outlined above. Specifically, the line poses a serious collision barrier to the birds in the Lower Klamath feeding flight when they are passing less than 60 yards above the ground. Nowhere in the DEIS is this feeding flight phenomenon mentioned. Nowhere is its magnitude, regularity or changing flight altitude under different weather conditions recognized. Also, the DEIS fails to comment upon the existence of ground and true fogs in the Klamath Basin area.

In terms of the problem of feeding flight collision, the line would pose an especially dangerous obstacle during foggy weather, high winds, and the very late portion of the evening feeding flight. During these conditions the birds are literally forced to fly in a corridor above the ground which would overlap greatly with the 14-50 yard height of the lines and the 30-50 yard height of the support towers. During true fogs (those which extend above the ground more than 200 yards) the waterfowl in this area must not only fly through the fog on their way to and from their feeding area, but also must drop through it to reach the ground. As a result, they fly very close to the ground. Fogs develop in the Basin on a very localized basis and are fairly common. Often the incidence of fog in the area that would be crossed by the PP&L proposed primary route or the BLM alternate route II does not coincide with more generalized weather reports or records from official recording stations only a few miles away, for example at the Klamath Falls Airport.

The very late portion of the evening feeding flight would be the most threatened by the proposed line. Because the birds fly in a corridor from 20-50 yards above the ground, they must unavoidably intersect the space occupied by the transmission lines and towers. The birds

are forced to fly this low (or even lower under adverse weather conditions) in order to be able to see flocks of waterfowl already feeding on the ground. These flocks on the ground are difficult to make out in such low light because of the natural camouflauge of the ducks, which blends so perfectly with the coloration of the stubble or earth of the grainfields. Another complicating factor is that there are no natural obstructions such as trees near the line to condition the birds to fly higher. Instead, the line would cross a barren expanse of grainfields, a geography the birds are conditioned to fly low over. The proposed line will run at an approximately 90-degree angle to this feeding flight. While other transmission lines have been built along duck migration routes, those lines generally run in a north-south direction, thus giving the birds more opportunity to observe and avoid the line, or they do not involve or intersect a feeding flight such the Lower Klamath feeding flight. This a unique flight and the 90-degree intersection of the transmission line will pose a unique problem. The fact that we are dealing with a huge feeding flight, that regularly flies back and forth in the same corridor, should cause the BLM to critically evaluate some of the articles cited as supposedly tending to show that transmission lines minimally interfere with waterfowl. (For example, the Arend's Study, prepared for Pacific Gas and Electric Company in 1970, that heads the list of literature cited in the DEIS, was conducted in June, July and August, which is certainly not a time of year involving heavy waterfowl migratory concentrations. Furthermore, the ducks using San Francisco Bay are to a large extent diving ducks that use the Bay for resting and feeding. Dabbling ducks that would fly to other locales to feed are not representing in large numbers in the Bay. In addition, the Arend's Study does not deal with a large feeding flight phenomenon, where substantial numbers of birds will be continually trading back and forth through the same narrow corridor. These are only a few of the important distinctions that should be made in order to assess the actual value of the Arend's Study.)

It may be begging the obvious to state, but nevertheless, since there was no clear identification of the feeding flight in question, and the physical phenomenon and geographical setting that govern its historical pattern, the DEIS also contains no analysis of the impact of the proposed line, both temporary and permanent, on the feeding flight in question. The threat to this important natural phenomenon presented by the proposed line, if constructed along the PP&L primary route, or any other route crossing the Klamath Basin between the Lower Klamath Refuge and the grainfields utilized by these birds, is most dramatically pointed out in the testimony of Thomas A. Roster and the articles appended thereto, that constitutes a portion of the December 17, 1975 and March 2, 1976 transcript of the hearing before the Public Utility Commissioner of the State of Oregon, as regards the proposed line. That testimony, the arguments thereon, and the reply or rebuttal testimony of PP&L, are attached as Exhibit "A" to this letter, and by this reference incorporated herein. The reader's

attention is directed to such testimony and the material referred to therein for a more detailed description of the points and issues summarily referred to in this letter. As indicated in that material, the two greatest potential dangers to the birds within the feeding flight in question are collision with the transmission wires, the towers and the shield wires of the proposed transmission line and potential alteration of feeding flight pattern due to the presence of the line. In revising the DEIS, the BLM should read, consider and comment on not only Mr. Roster's testimony but also the extensive list of reference material cited in his March 2, 1976 testimony.

In closing, as regards the collision danger, it should be remembered that collision can occur not only when the ducks are flying in the feeding flight corridor but also as a result of being suddenly flushed into the air (especially at night) in the case of those ducks feeding on the agricultural lands under and immediately adjacent to the proposed transmission line route. For an indication that collision with overhead transmission lines, as a result of sudden flushing of birds on the ground, does occur, even during daylight, see "The Interaction Between Some Human Obstacles and Birds", the report from a project funded by the Madison Gas and Electric Company, prepared by Professor and Mrs. Daniel E. Willard, Environmental Awareness Center, University of Wisconsin, Madison Wisconsin.

II. ALTERNATIVE ROUTES

(a) In General.

Another important inadequacy in the DEIS in question, that is related to the Lower Klamath feeding flight, is the failure of the DEIS to describe and evaluate reasonable alternative routes in the Klamath Basin area that would avoid or substantially mitigate the threat to the feeding flight. The one alternate route analyzed by the DEIS in the Klamath Basin area (BLM alternate route II) does not avoid the feeding flight corridor, and has the same problem of directly crossing that corridor as does PP&L's proposed route. This failure to present and discuss an alternate route is even more surprising when it is noted that on the Midpoint to Malin segment of the line, the DEIS proposes and discusses an alternate route that runs more than 90 miles north of PP&L's proposed primary route. Yet in the Klamath Basin area there is no discussion of an alternate route that would pass several miles north of the principal Lower Klamath feeding flight corridor (Lower Klamath Refuge to Tulana Farms) or another alternate that would dip slightly south of the Oregon border so as to pass south of the feeding flight corridor. Furthermore, the color codes on maps B-2 and B-3 give the distinct impression that no environmental analysis was conducted concerning the effects the line would have on the California environment in those areas where the line, even as proposed by PP&L, closely parallels the Oregon-California border.

(b) Southern Alternative in the Klamath Basin.

The feasibility of one or more routes south of the feeding flight corridor should have been addressed. An artificial, manmade jurisdictional boundary, such as a state line, cannot properly be a reason for a DEIS failure to examine a logical area for an alternate route that would be less environmentally harmful, especially in the absence of any indication that there is evidence that such a route would be more environmentally harmful. The applicant (PP&L) might not wish, for reasons of its own, to locate a portion of the line within northern California; but the applicant's self-serving conclusions on this point cannot justify a failure to publicly examine and discuss this logical alternative.

In the Klamath Basin, an alternative route which goes south of the Tulelake-Lower Klamath National Wildlife Refuge in California, would remove most of the problems caused by a transmission corridor through the middle of the feeding flight phenomenon. In addition, such a route could closely parallel various ridges in the area, thus reducing visual impact, as well as taking advantage of the natural tendency of ducks to quickly rise higher in order to cross high, natural solid obstacles such as mountains or ridges. The further from the ground the birds are accustomed to flying in an area, the less the potential for collision impact.

(c) Northern Alternative in the Klamath Basin.

Another important alternative route, that would substantially avoid the threat to the ducks in the Lower Klamath feeding flight, which the DEIS also fails to examine, is one that parallels an existing PP&L 230 KV line which skirts the northeastern edge of the Klamath Basin and crosses the Basin, Highway 97 and the Klamath River close to Klamath Falls, Oregon. It is almost impossible to determine from the DEIS that this 230 KV line already exists. The Western Systems Coordinating Council map, dated January 1, 1976, constituting Appendix "C" to the DEIS, does show a 230 KV line going from the Malin Substation into Klamath Falls and then southwest out of Klamath Falls. However, the text of the DEIS does not examine this existing 230 KV corridor as a potential alternative route that would avoid the impact upon the Lower Klamath feeding flight. Again, PP&L might wish for reasons of its own (such as the fact additional land could cost more in this corridor than one more entirely located in a rural area) to disregard this alternative; but that is not a justification for the BLM's failure to analyze it as an alternative.

The important point is that by paralleling the existing 230 KV line, from the Malin Substation to a point southwest of Klamath Falls where that existing 230 KV line crosses PP&L's proposed primary route, the threat of harm to ducks in the Lower Klamath feeding flight will be substantially eliminated.

A number of things make the failure to discuss the alternative of following a portion of the existing 230 KV line almost ludicrous. First, Mr. Thomas A. Roster, before he even knew of the existence of the 230 KV line, proposed an alternate route in the Klamath Basin that would have roughly followed the existing 230 KV route, based on considerations of minimal interference with man and waterfowl. See Exhibit "A" hereto, Transcript of Public Utility Commissioner Proceedings of December 17, 1976, p. 82, lines 4-13.

Second, it was only after his first presentation at the Public Utility Commissioner's Hearing that Mr. Roster, again based on his own investigation and not through any information furnished by PP&L, determined that the 230 KV line in question existed. See Exhibit "A" hereto, Transcript of Public Utility Commissioner's Hearing of March 2, 1976, p. 350, line 23 through p. 351, line 11,

Third, it is important to note that it was Mr. Roster who even brought up the subject of the existing 230 KV line corridor, and further to note that PP&L had never even examined the 230 KV line corridor alternative in the Klamath Basin area. See Exhibit "A" hereto, Transcript of Public Utility Commissioner's Hearing of March 2, 1976, p. 288, line 12 through p. 289, line 18.

Finally, the BLM appears committed to the very understandable and laudible philosophy that in building future power lines, such lines should follow existing power lines wherever possible. (DEIS, II-134.) It seems so logical that it would hardly need to be restated that there is every reason in the world to place new transmission lines in existing transmission corridors, rather than allow the creation of new corridors with the land use and environmental consequences such new corridors will create.

(d) Summary As Regards Failure to Discuss Reasonable Alternatives in the Klamath Basin.

Our clients are suggesting that the DEIS should consider an alternate route for approximately eight (8) miles of the Midpoint to Medford corridor, as proposed by PP&L. The northern alternative route outlined in Paragraph II(c), above, would result in the eight-mile segment being replaced by an approximately 14-mile segment. The southern alternative route proposed in II(b), above, would result in a somewhat longer substitution, the exact difference in mileage depend-upon where the southern, i.e., south of the California border, alternative was placed.

The DEIS contains a document from PP&L indicating that PP&L itself relocated 157 miles of the proposed route (presumably before the proposed primary route was submitted to the BLM or to the Public Utility Commissioners of Oregon and Idaho) to "best fit" local conditions. (DEIS IV-45.) One of the reasons for a portion of this voluntary relocation, in the area between Bruneau Valley and the Snake River, was in order to avoid possible interference with military practice bombing operations. (DEIS IV-45 and II-132 and 133.) If relocation to avoid possible aircraft collision was carried out -- and pilots who read maps, see lights and use radar and other sophisticated detection devices should have a greater ability in advance to avoid known flight hazards than would ducks -- it should certainly not be unrealistic for the DEIS to evaluate a small segment of alternative routes that could avoid a substantial harmful effect on large numbers of birds in the largest duck feeding flight concentration in North America.

Finally, since the BLM was willing to consider major alternative routes for many miles of the proposed line (see DEIS Map "B" and accompanying discussion in DEIS text), there should be no unwillingness to consider alternatives for a very small segment of the line that would substantially avoid adverse impact on such an important natural phenomenon as the Lower Klamath feeding flight.

III. UNDERGROUND LINES

This alternative is not adequately discussed in the DEIS. For example, while cost might make it unfeasible to underground the entire line, why would undergrounding not be a viable alternative for six to eight miles of line in the Klamath Basin? The DEIS was written with a definite bias against undergrounding. For example,

on page VIII-215 it is stated that ". . . underground transmission costs are shown to be as high as 10 times that of overhead transmission along the same right of way." Are there any independent bases or studies to verify this estimate? Is there no information newer than 1971 (the only report cited in the DEIS)? Furthermore, even if undergrounding might cost as high as 10 times as much, it is not stated that such a method could cost as little as "X". Only the high figure is given. Why?

Although an underground line might be more expensive, many of the problems which could occur in the construction of such a line -- and therefore effect the actual cost of undergrounding -- are not present in the Klamath Basin. The soil is lakebed, not rock. It is on level ground, and the distance to be traversed is relatively short. A new maintenance road could be avoided by placing the line adjacent to existing east-west roads. The undergrounding alternative should be examined for the Klamath Basin area, even if it is not a reasonable alternative for the entire line from Midpoint, Idaho, to Medford, Oregon.

IV. DUCK VISION AND WIRE COLLISION PROBLEMS.

The impact statement fails to specifically discuss the impact that all the wires of the power line will have on ducks. A collision problem will exist, and it is aggravated by the fact that the line runs close to perpendicular to the Lower Klamath feeding flight route. The visual accuity of waterfowl is not assessed or discussed in the DEIS at all with particular regard to the implications of their visual limitations as they relate to power lines. Given the poor distance vision which ducks possess, it is doubtful that they will be able to see the wires at great distances, especially in poor weather or during the night portion of the feeding flight movement. The closer the ducks are to the line, the less time they will have to react. If they do see the power lines and react by rising, there is a distinct possibility they will not see the 3/8" shield wires, which are approximately 31 feet above the conductors, and will collide with those shield wires. This potential problem has not been treated in the DEIS. It has also not dealt with the possibility of birds becoming entangled with the three cables composing each conductor.

V. CREATION OF A NEW, PERMANENT TRANSMISSION CORRIDOR (Legal and Environmental Implications).

As the DEIS notes, approval of any new east-west transmission corridor will in all likelihood establish a permanent power line

across relatively unspoiled areas. Although the projected life of the project is either indefinite (III-122) or 50 years (III-34), it is very likely that further expansion will occur, including the addition of other 500 KV power lines (I-41 and VI-3). The DEIS reference to the Western Systems Coordinating Council map (Appendix "C" to the DEIS) as projecting the possible addition of another 500 KV transmission line parallel to the proposed line in question is, however, confusing. The map in question shows no such proposed additional power line. Where did the DEIS reference come from, then?

The environmental point to be made, as regards the impact of this proposed line as it relates to future construction, is far from clearly stated. The construction of the proposed line, and the corridor established by it, is almost more important for PP&L in the future than it is now. At a time when it is becoming increasingly clear that approval is not necessarily automatic for the construction of new transmission facilities, more and more pressure can be expected to require any new transmission facilities to be located within existing transmission corridors, in support of the argument that "the environmental harm there has already occurred, so don't spread it elsewhere." As a result, environmental consequences in an existing corridor will be downplayed in order to properly avoid greater harm in an area not already exposed to the construction of transmission facilities. Environmental protection, therefore, absolutely demands that new power line corridors be so situated as to avoid all significant environmental impact.

The most glaring example of how environmental harm can be expected to be given short shrift in the future relates to an argument that is being heard more and more concerning the possible interpretation of the meaning of Oregon Revised Statutes (ORS) Chapter 469, Energy Conservation, as that chapter relates to future power line construction in existing corridors. Although our clients do not accept this interpretation (of the meaning of ORS Chapter 469), it may be forcefully argued that ORS 469.020(6)(c) and 469.300(10)(c) specifically entitle PP&L to a site certificate for the construction of additional power lines within any existing transmission corridor, without complying with the normal and detailed procedure otherwise required by ORS 469, and, in addition, that any later construction of additional transmission lines in excess of 230 KV by PP&L, within a corridor that is up to 500 feet outside the corridor that will be established by construction of the proposed 500 KV line in question, can be argued to be entirely exempt from the site certificate requirement of ORS Chapter 469. Thus PP&L might argue at a

later time that once having received a route specific certificate of public convenience and necessity from the Oregon Public Utility Commissioner, for the proposed 500 KV line in question, any agency or department of the state of Oregon should not give environmental concerns the same weight, if indeed they are considered at all, in connection with any application for any state certificate required for the construction of additional lines along any existing corridor established for this proposed line.

The conclusion from all the above is that the EIS in question should discuss in detail (and it presently does not) the environmental consequences of not just the presently proposed 500 KV line but also the environmental implications resulting from reasonably expected construction of additional transmission facilities within the corridor that will be established for the proposed line. Furthermore, it should be clearly pointed out that under existing law in the state of Oregon a very strong argument can be made that the environmental protection inherent in the detailed requirements of ORS 469 will not be brought to bear in the case of additional transmission facilities proposed for construction in any corridor approved for the line in question. Finally, it should be pointed out in the EIS that the present proposed line itself did not have to undergo the detailed site certificate requirements set up in ORS 469, due to the further exemption specifically tacked on for this line by ORS 469.410(1)(a).

VI. FEEDING FLIGHT PATTERNS AND SOCIO-ECONOMIC EFFECTS.

It is unclear what feeding flight pattern impacts the proposed power line will have on the massive Lower Klamath feeding flight. If the birds incur heavy collision losses due to collision with the line, one possibility is that the ducks could change their feeding flight route in order to avoid the hazard. One very possible alternative would have the ducks remaining in California and feeding on grainfields in that state, since there is adequate feed for them there. If this occurs, then among other consequences, the Oregon hunting industry would be seriously hurt, for many Oregon hunters do not possess California hunting licenses, and hunters using commercial facilities in Oregon during their trips might change to California facilities. The possibility of such a change in the feeding flight pattern has not been examined in the DEIS nor have the potential adverse economic effects of such a change to the southern Oregon economy been examined.

VII. MITIGATION MEASURES.

Our clients believe that the testimony submitted by Thomas A. Roster, which constitutes a part of Exhibit "A" to this letter, and the

articles cited in that testimony, demonstrate that a serious risk of harm to the Lower Klamath feeding flight will exist if the proposed line is constructed along the PP&L primary route through the Klamath Basin. This significant loss can be substantially avoided by rerouting or undergrounding the proposed line in that area where the feeding flight occurs. To take care of the possibility of significant adverse impact on waterfowl and other important wildlife in areas not referred to in this letter, that will not be substantially mitigated by the location or manner of construction of the proposed line, the following two additional mitigation measures must be added to those specified in Section IV of the DEIS and made applicable to federal, state and private lands involved in the proposed route:

> "If substantial losses of or harm to wildlife does occur, either on federal lands or off federal lands but involving wildlife (such as migratory waterfowl) that is subject to federal protection and is traveling to or from federal lands at the time of the loss or harm, then towers and transmission lines in the areas where the loss or the harm is occuring will be removed and relocated along a different route or redesigned and relocated on the existing route so as to prevent or substantially eliminate the loss or harm in question. This mitigation measure is specifically designed to assist in remedying those adverse wildlife impacts that are known to occur or can be reasonably projected to occur, as a result of the construction of the transmission line, but the magnitude of which proves difficult to assess prior to actual construction and operation of the line in question. This mitigation measure is also specifically designed to assist in remedying those adverse wildlife impacts that turn out to be, after construction of the line, much more serious and harmful in their implications than was projected prior to the construction of the line.
>
> "Pacific Power and Light Company shall guarantee access to the power line right of way for representatives of state and federal wildlife agencies, as well as representatives of recognized non-profit charitable organizations concerned with the welfare of wildlife, for the purpose of such agencies and individuals conducting studies to evaluate the continuing effect of the

transmission line, its towers and related facilities, on wildlife."

In addition, if for any reason the BLM should conclude, albeit erroneously in our clients' opinion, that the available evidence does not warrant the BLM exercising its permit authority in such a way as to require, or cooperate in requiring, the relocation or undergrounding of the proposed transmission line in the Lower Klamath Basin, then the above-mentioned mitigation measure would serve as a basis for requiring later corrective action from PP&L. This later corrective action would not be as beneficial as avoiding the problem from the beginning would be, because some substantial adverse effects upon the birds would have already occurred and there would be added to the initial cost of constructing the line the cost of relocating or undergrounding it. However, unless the BLM is erroneously willing to conclude that there is no reason to do as much as possible to protect an important natural resource, like the Lower Klamath feeding flight, then the additional protection offered by the suggested mitigation measure is absolutely necessary. That language should be included in the final EIS as well as in any permits issued to PP&L by the BLM, which authorize construction of the proposed line.

VIII. GEOTHERMAL RESOURCES.

Although geothermal resources are mentioned at several points in the DEIS (II-16, II-216, VIII-228), it does not mention where any of the geothermal resource provinces (GRP's) are located, and does not give more than conclusory statements regarding the location of known geothermal resource areas (KGRA's). How many GRP's lie on Pacific Power and Light's proposed route? This is information that is relevant and would be useful to both the public and to the official that finally makes the decision on the power line. Two additional appendixes should be attached to the final EIS, consisting of a map that shows the location of all KGRA's along the proposed route and all alternate routes as well as a map that identifies the location of those areas potentially valuable for geothermal exploration as have been identified by the U.S. Geological Survey.

S U M M A R Y

A DEIS that barely comments upon the full extent and probable results of transmission line impact upon migrating waterfowl is not adequate to deal with the impact upon a feeding flight phenomenon such as is present in the Lower Klamath Basin. The problems associated with waterfowl migrating across a transmission line corridor twice a year are indeed important but no less important should be the identification and discussion of the likely impacts of a proposed line upon hundreds of thousands of ducks who, over a few-month period, repeatedly fly back and forth in a narrow corridor that almost perpendicularly intersects the transmission line route. Impacts to be expected from occasional exposure to transmission lines cannot reasonably be expected to be the same as the impact generated by frequent and recurring exposure of a large number of birds, under all sorts of weather conditions and degrees of visibility. The environmental consequences to a natural resource as important as the Lower Klamath feeding flight must be more adequately and thoroughly presented to both the public and the responsible federal official(s) whose decision as to whether or not to allow the construction of the proposed transmission line, and if so along what route, is vitally dependent upon the material contained in the EIS. Even if those decision makers were to decide that there is a need for the proposed line (a fact that our clients do not mean to accept or admit by this letter), they still must decide where the line should be located; and the location with the least adverse environmental consequences is obviously preferable. Unless the issues relating to the Lower Klamath feeding flight phenomenon presented in this letter are dealt with, and made a part of, the final EIS in this case, it is most respectfully submitted that information vitally necessary to an informed decision will be lacking. Much of the EIS is commendable for its thoroughness and attention to important detail; but this is not the case as regards the waterfowl issues that are the subject of this letter. The impacts of the proposed line on the Lower Klamath feeding flight, alternative routes that would avoid or substantially lessen those impacts and mitigation measures that must be required in order to lend a greater degree of protection to our dwindlin wildlife resources, all need to be more thoroughly and adequately addressed in the final EIS.

Perhaps the clearest explanation of why the BLM should more thoroughly investigate the adverse waterfowl impact issues can

be found in the testimony of PP&L's own representatives before the Public Utility Commissioner of the State of Oregon. Particular reference is drawn to the testimony of PP&L's own expert wildlife biologist, Mr. C. J. Hanel, which constitutes a portion of the Transcript of the March 2, 1976 PUC Hearing. The purpose of that testimony by Mr. Hanel was to rebut Thomas A. Roster's previous testimony (given at the December 17, 1975 PUC Hearing) in which Mr. Roster pointed out the substantial threat to the ducks in the Lower Klamath feeding flight that would be posed by the proposed line. According to Mr. Hanel, a primary reason that PP&L concluded that there would be no substantial harm to the ducks in the Klamath Basin was that waterfowl refused to travel in dense fog and complete darkness (Tr., March 2, 1976 PUC Hearing, p. 182, lines 13 and 14); and ducks are active under full moon conditions but on dark and moonless nights, with cloud cover, their travels cease (Tr., March 2, 1976 PUC Hearing, p. 201, line 19 through p. 203, line 9). This being the case, Mr. Hanel's reasoning would continue, there is little danger to ducks from structures as large and visible as would be the proposed line and its towers during the more favorable visibility and weather conditions under which ducks would travel. Anyone who has had any experience with waterfowl knows that migrating waterfowl do not prefer to travel in dense fog or darkness but that they will do so if it becomes necessary. Furthermore, and even more important, if PP&L had really known anything about the Lower Klamath feeding flight --- and they obviously did not, despite their declarations, have the relevant information --- it would have been clear to them that this particular phenomenon, which is often associated with ducks temporarily resting or residing in a wildlife refuge, regularly occurs, at least in the Klamath Basin, in periods of total darkness and adverse weather conditions, including fog. Furthermore, the same transcript demonstrates that Mr. Hanel was very unfamiliar with the feeding flight in question, having never observed it himself. (Tr., March 2, 1976 PUC Hearing, p. 206, lines 18 and 19.) Finally, Mr. Hanel was totally unfamiliar with the impact of the "predator cycle" on tower and transmission line wildlife fatalities, from the standpoint of explaining why an observer who was not immediately present on the scene, at the time of the collision, would most likely not find any evidence of waterfowl collision with a power line, even the very next morning. (See March 2, 1976 Transcript, p. 208, lines 6-14.)

Since it is clear from the information produced at the Oregon PUC Hearing that PP&L itself did not have the relevant information concerning the impact of the proposed line on the feeding flight in question, it is absolutely critical that the responsible federal official have that information before making any decision in this matter.

Very truly yours,

COONS, COLE & ANDERSON

Bruce H. Anderson

BRUCE H. ANDERSON

BHA:cr
Enclosures
cc: Clients

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO ATTN OF: 10FA - M/S 623

OCT 22 1976

89

Mr. M. W. Storms, Director
Oregon State Office
Bureau of Land Management
U.S. Department of the Interior
P.O. Box 2965
Portland, Oregon 97208

Dear Mr. Storms:

We have completed our review of the Draft Environmental Impact Statement on Pacific Power & Light Company's proposed 500 Kv Powerline from Midpoint, Idaho to Medford, Oregon and have the following comments to offer for your consideration in the preparation of the final environmental statement.

1. The statement's discussions of surface water quality, fishery resources and associated environmental impacts is rather brief. These discussions should be expanded in the following manner: (a) describe the anadromous fish runs and resident fishery resources in each major stream crossed by a route alternative and identify the critical seasons for migration and spawning, (b) identify the critical water quality parameters which might be affected by powerline construction, their acceptable ranges and current values, (c) determine whether construction activities are likely to cause any of those parameters to go "outside" of their acceptable ranges, (d) identify the specific mitigation measures which will be used to minimize impacts on fishery resources, (e) attempt to quantify the residual impact on fisheries after accounting for the probable effectiveness of mitigation measures. Water quality parameters of concern would include dissolved oxygen, dissolved nitrogen, temperature, sediment and turbidity. At a minimum, the mitigation measures should include (a) the scheduling of construction activities to avoid critical periods, (b) approval of stream crossing procedures and vegetation removal and management activities by the appropriate State fish and game management agencies.

2. The statement's estimates of wildlife habitat affected by the proposed powerline and its alternatives should supplement the gross acreage figures

given with an estimate of the proportion (percent) of the available habitat which is likely to be affected. This would give the reader a much better picture of the magnitude of these impacts. The statement should also indicate whether the indirect impacts, in this regard, are limited to increased hunting pressure and temporary avoidance reactions, during construction.

3. The statement provides little significant discussion of the impacts of future and necessary associated transmission system additions. In particular it would seem appropriate that this statement discuss the impacts of the proposed 345 Kv powerlines from Jim Bridger to Kinport, Idaho and from Kinport to Midpoint, Idaho, in that they appear to be necessary to the attainment of the objectives of the Midpoint-Medford Powerline.

4. The statement does not discuss system alternatives at all. In particular, it is our understanding that preliminary power flow studies by the Bonneville Power Administration indicate that planned additions to the BPA main grid could wheel this energy from its point of generation to PP & L's market area. Given that BPA's main mission is the construction and operation of long distance powerlines in this region, we think that it would be appropriate to review the granting of a Federal right-of-way to a private powerline which might unnecessarily duplicate BPA facilities. We understand that BPA's comments on the DEIS also raise this issue and we look forward to seeing a complete discussion of system alternatives in the final environmental statement.

Based upon these gaps in the environmental statement, we have rated it ER-2 (environmental reservations, insufficient information). The environmental reservations are based primarily on the potential duplication of transmission facilities and lack of discussions of system alternatives as addressed in comment number four(4). This rating and the date of EPA's comments will published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions under Section 309 of the Clean Air Act, as amended.

We appreciate this opportunity to review your environmental statement. I and Dan Steinborn of my staff, would be glad to answer any questions which you may have about EPA's concerns. We may be reached at 399-1595 (FTS).

Sincerely,

Alexandra B. Smith

Alexandra B. Smith
Director
Office of Federal Affairs

FRIENDS OF THE EARTH

15 October 1976

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR
97208

90

Dear Sir:

We have received a copy of the draft EIS Proposed PPL 500 kV Power Line Midpoint, ID-Medord, OR. The following are the comments of the Northwest office, Friends of the Earth:

GENERAL COMMENTS

We believe it imperative that the BLM deny granting an easement for the proposed route. We would give the BLM our full support should the BLM choose not to grant a right-of-way easement for this proposed power line. This EIS does a good job of documenting the effects of the proposed power line and the improvement in quality of impact statements issued by the BLM is noted and appreciated. Major shortcomings of this EIS lie in the areas of assessing the need for the project and the alternatives to the proposed action.

More specific DEIS comments are as follows:

Preface p. xxviii
Please include a list of the interdisciplinary team.

Purpose and Need pp. I-7 to I-17
This section does not provided enough information for the reviewer to understand either the purpose or the need for the proposed line. Further discussion is needed including but not limited to the following:

a) What is the rationale for transmitting power from Wyoming to Northern California rather then say, selling the power east and providing power from sources closer to the load center from the magic complex, interconnected transmission grid of the Pacific Northwest?

Northwest office 4512 University Way NE Seattle, Washington 98105 (206) 633-1661

This is recycled paper.

b) What is the rationale for arguing that transmitting power from Wyoming provides a "direct means" of supplying power to meet the energy growth needs of southern Oregon (page I-7) when it appears that PPL is more interested in getting rid of surplus power from coal-fired plants in Wyoming.

c) How does the proposed transmission line contribute to the reliability of the interconnected transmission grid in the Pacific Northwest?

d) What is the limiting factor in the existing transmission system that limits its maximum transmission capability to 1112 megawatts?

Enclosed please find as part of these comments two articles. The first, carried by the Seattle P-I 14 October 1976 is entitled "Energy Expert Blasts Demand Forecasts by Utilities". William A. Brewer, who currently heads the Washington Energy Research Center, challenges the validity of the West Group forecast. We do not ask that the BLM become load growth forecasters, rather we ask that the BLM follow CEQ quidelines and undertake a rigorous exploration and objective evaluation including a critical look at PPL's proposed need. The second article is from the Idaho Statesman 3 October 1976 and should be incorporated into the conservation alternatives. How ironic that ID saves on electricity at the same time it gives up land so that Oregon can waste more energy!

Post Construction p. I-37
Pacific states that it would rehabilitate all areas disturbed during the construction sequence. What provisions for monitoring as required by Executive Order 11514 would be developed?

Interrelationships p. I-39
It states, "It could be possible to replace existing transmission lines with high capacity lines to provide the needed transmission capacity." This option is given only cursory mention in the alternatives section. In its present form, the alternative section is wholly inadequate. Relocation of a proposed powerline does not represent the alternatives required by NEPA. CEQ quidelines note that "A rigorous exploration and objective evaluation of alternative actions that might avoid some or all of the adverse environmental effects is essential. Sufficient analysis of such alternatives and their costs and impact on the environment should accompany the proposed action through the agency review process in order not to foreclose prematurely, options which might have less detrimental effects."

Wildlife p. II-60
It states, "The numbers and distribution of the wildlife species found along the proposed right-of-way is known only in a few instances." This is an unsettling admission of lack of base-line data. How much of the proposed route across BLM lands is grazed? How are AUM's developed for these areas without wildlife data?

Hagerman to Owyhee Junction Segment p II-151
We do not understand your scenery-sensitivity rating for the Bruneau Sand Dunes. Page II-139 states that "If an area is the only one of its kind, it has a higher relative value." We believe the Bruneau Sand Dunes is of high scenic quality and ask that your rating be changed from C1 to A1.

Recreation Resources Midpoint to Malin p. II-190
It states, "primary recreation uses include whitewater float-boating and sightseeing on the Owyhee; . ." As one who participated in a BLM lead backpacking trip into the Owyhee River area in southwestern ID in July, please add backpacking to this section as a primary recreation use.

Soils p. II-5
This is a most amusing section reminiscent of something out of Alice in Wonderland. The Universal Soil Loss Equation might be of some value had you any data to plug into it. Reviewing your assumptions and rationale shows that lack of site-specific information and use of arbitrary figures revives the axiom of GIGO (Garbage In-Garbage Out).

Wildlife p III-42
It states, ". . .little has been done to determine impacts on wildlife [from corona effects]. BPA's DEIS on the Hot Springs Bell 500 kV line on page 47 states that ". . .audible noise has no effect on wildlife." What is the current position on this and what studies have been done?

Land Use p III-76
You would be amiss not to include in your list of impacts on residential use, C.B. interference.

Mitigating measures p. IV-1
A CONSERVATION PLANNING MEMORANDUM-15 from Kenneth W. Grant dated 5 May 1975 states that projects resulting in loss of type 3 through 20 wetlands shall be "mitigated by establishing

wetland habitat values in the same vicinity that are equivalent, insofar as possible, to the wetland habitat values lost."

The point being that at least in this case, mitigation means an actual restitution or substitution of land for that which is lost. Somehow allowing PPL to come up with the most environmentally damaging route and then cooking up ways to reduce the environmental impact is not mitigation. Mitigation should include establishing new habitat, equivalent to the habitat values lost, as well as seeking ways to lessen the environmental impacts by positive actions

Chapter VIII Alternatives to the Proposed Project p. VIII-1
A revised draft is necessary in order to access the alternative methods of meeting the applicants project objectives.
The alternative routes are merely minor modifications of the proposed route and do not even give cost estimates to aid the reviewer. Nowhere is there an examination of viable alternative either by additional power generation at southwest Oregon-California facilities or transmission from some other part of the grid. It is the responsiblity of the BLM as lead agency, to determine if alternative sources of power or purchase of power and transmitting it to the load areas over existing grids is in fact, possible or feasible. Until this is done the BLM can not be considered to be in compliance with NEPA. These alternatives must be addressed in a revised draft.

Undergroundings p VIII-216
Regarding the disadvantages of underground cable as it relates to excavation of the trench, why should underground cables be more undesirable then, say, underground gas or oil lines?

No Action p. VIII-218
No mention is made of the quite likely possibiiity of an oil glut on the West Coast of Alaskian oil next year. The Reduced Market Demand, excerpted from BPA, is far from a rigorous exploration or objective evaluation. At least as much space should be devoted to upgrading existing transmission facilities as for the alternative routes you have chosen since it more then the cosmetic route changing alternative represents a real option which would have less detrimental effects.

SUMMARY
In conclusion, it is obvious that the BLM is trying hard and

has come a long way in improving the quality of their EISs'. However, we have a National Environmental Policy which requires integration of environmental factors into agency decision making. It is difficult to see how this EIS would aid the BLM in deciding whether to grant PPL an easement over public lands. In analysing the alternative routes presented it is clear that Alt. 1 is least environmentally damaging. We urge you however, to prepare a revised draft and refrain from graning a right-of-way for PPL's proposed route.

We hope these comments have been of some help in revising your draft and we will be looking forward to seeing what changes you have made in your next statement.

Thank you for allowing us to comment on the Proposed PPL 500 kV Power Line Midpoint, ID-Medford, OR.

Sincerely,

David E. Ortman

David E. Ortman
Research Associate
Friends of the Earth

DEO/tim

ROBERT W. STRAUB
GOVERNOR

Executive Department
INTERGOVERNMENTAL RELATIONS DIVISION
240 COTTAGE STREET S.E., SALEM, OREGON 97310

97

October 22, 1976

Mr. Storms, State Director
Bureau of Land Management
729 NE Oregon Street
Portland, OR 97232

Dear Mr. Storms:

Re: PP&L 500 KV Transmission
Line from Midpoint, Idaho
to Medford, Oregon
PNRS 7608 4 1230

The State Clearinghouse has received additional comments suggesting areas for improvement on the PP&L 500 KV Transmission Line draft Environmental Impact Statement subsequent to our October 7, 1976 letter.

Copies of these comments, from the Oregon Department of Fish and Wildlife, the Aeronautics Division of the Oregon Department of Transportation, and the Department of Land Conservation and Development, are enclosed for your attention.

Please consider this letter and enclosures as an addendum to our previous letter.

Sincerely,

William H. Young
Administrator

WHY:llh

encl

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

(X) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

REMARKS

(Comments attached)

addendum

Agency Fish + Wildlife By William E. Pitney
ENVIRONMENTAL MANAGEMENT SECTION 10-14-76

September 14, 1976
Salem, OR 97310

Jack M. Cartwright
Utility Office Engineer

Raymond Costello
Transportation Planner
Planning Section

B U I L D I N G

Environmental Impact Statement
Pacific Power & Light Co.
Proposed 500 KV Power Line
Mid Point, Idaho-Medford, OR

Here is the draft Environmental Impact Statement for Pacific Power & Light Co's. proposed 500 KV Power Line per your request. I have reviewed the alternate routes for Pacific Power & Light Co's. proposed 500 KV Power Line and find no conflicts with proposed highway construction.

PP&L should be advised that they will have to make application for highway crossing permits through the Highway District Engineers having jurisdiction.

JMC:jr
Attach.

cc: J. F. Hagemann

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

(X) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - - -

A review by the Aeronautics Division of the proposed routes for the Pacific Power and Light Company's proposed 500KV line through Oregon has been completed. The following comments are submitted:

1. There appears to be no adverse impact upon those airports adjacent to or in relatively close proximity to the applicant's proposed primary route.

2. That portion of the applicant's proposed alternative route #1 that borders the Ashland Airport may present a hazard to landing aircraft if the towers are appreciably higher than those presently installed along the present right-of-way. Appropriate warning lights should be installed if the latter situation will exist.

Agency AERONAUTICS DIVISION By Ray Costello

OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

PNRS STATE REVIEW

Project #: 7608 4 1230 Return Date: 10-1-76

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW
DRAFT STATEMENT

( ) This project does not have significant environmental impact.

( ) The environmental impact is adequately described.

( ) We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.

( ) No comment.

- - - - - - - - - -

REMARKS

Agency LCDC By Gary G. Gustafson

Project: #76084 1230

It is our feeling that the most serious overall deficiency in the draft EIS for the Pacific Power and Light proposed 500 KV line is the failure of the DEIS to address the statewide planning goals and guidelines. Specifically, additional information is urgently needed in the DEIS to adequately deal with such matters as (a) showing how the existing or developing comprehensive plans of affected Oregon cities and counties will be impacted by, or will impact, the proposed project, and; (b) showing how the DEIS was formulated with the existing plans of local governments being consulted and used as a data base.

The Oregon statewide planning goals expect that federal agency plans will conform to the comprehensive plans of cities and counties. State agencies and special districts (including private utility plans) are required to conform any programs or plans affecting land use in accordance with the statewide planning goals and guidelines approved pursuant to ORS 197.005 to 197.430 etc. Federal agencies are expected to make their needs known during the preparation and revision of city and county comprehensive plans. In addition, during the development of their plans, federal agencies are also expected to create opportunities for review and comment by cities and counties. All this should make it evident that comprehensive planning for an area will result in one coordinated land use plan, which is agreed to and utilized by all affected agencies because it incorporates their needs and desires. This will eliminate much of the duplication and misdirection which often occurs when each affected agency develops its own plan independent of, and uncoordinated with, other agencies which have jurisdiction in the

same planning area. In this particular case, it is painfully apparent that the comprehensive plans of affected Oregon cities and counties were not taken into account during the development of the DEIS.

Although the DEIS certainly includes a wealth of background data pertinent to several of the statewide goals, the intent and direction specified by these goals was not addressed. The following goal topics are believed to be particularly pertinent to the 500 KV DEIS:

a) Citizen Involvement (Goal 1);

b) Land Use Planning (Goal 2);

c) Agriculture (Goal 3);

d) Forestry (Goal 4);

e) Natural Resources (Goal 5);

f) Economy (Goal 9);

g) Public Facilities (Goal 11);

h) Energy Conservation (Goal 13).

For example, the public facilities goal and guidelines deal specifically with electric transmissions lines. No consideration was given in the DEIS to the pertinent parts of this goal.

Generally speaking, we feel that other agency comments (rather than the LCDC) can more adequately deal with and discuss specific concerns and deficiencies now evident in the 500 KV DEIS (i.e. Fish & Wildlife comments). However, we wish to emphasize our intent to provide consistency between all agency and local government planning efforts. Therefore, we would appreciate your attention to these comments and look forward to your addressing the statewide planning goals in the final EIS.

GG:ac

OSPIRG
Oregon Student Public Interest Research Group
400 Hughes Bldg.
115 S.W. Fourth Avenue
Portland, Oregon 97204
(503) 222-9641

Rec'd 11/2/76

October 15, 1976

Murl W. Storms, State Director
Bureau of Land Management
Department of Interior
Oregon State Office
PO Box 2965
Portland, Oregon 97208

38

Dear Mr. Storms:

Your agency's Draft Environmental Impact Statement on the proposed Pacific Power & Light Company Midpoint, Idaho - Medford, Oregon 500 KV powerline has been the subject of our scrutiny for some time. We feel that this document has substantial shortcomings in its evaluation of the environmental (which includes social) impacts of the proposed project. These short comings and unanswered questions of our own about the proposed project compel us to compose these comments.

1. Many public works projects, and projects such as this one in particular, by supplying a resource which is deemed desirable by people interested in commercial development, have effects which extend far beyond their immediate construction sites. This document makes no attempt to discuss the possibility of secondary or induced growth due to the proposed installation of this powerline, particularly in the Medford area.

The draft devotes only two sentences to Socio Economic Impact at page VIII-4. CEQ Guidelines say an EIS should discuss in depth any implications of the proposed action for population distribution or concentration and the effect of any possible change in population patterns upon the resource base, including land use, water and public services. (Council on Environmental Quality, Preparation of Environmental Impact Statements, Guidelines, CFR, Title 40, Chapter V, at Part 1500.8.) These quidelines are meaningful, if only because courts have identified them as a "reasonableness standard" in reviewing the adequacy of environmental impact statements. Two sentences seem inadequate for the final draft's discussion of these secondary consequences of the project.

This document also fails to address the questions of whether or not the increased availability of electricity in the Southwestern quadrant of Oregon will outstrip the availability of the other resources necessary to

provide the quality of life demanded by Oregonians (i.e., clean air and water, open spaces and uncrowded public facilities). Much more research is obviously needed in this area and any results should be included in this EIS.

For instance, Oregon Department of Environmental Quality recently concluded a study which recommends designating the Medford-Ashland area as an Air Quality Maintenance Area with significant air quality problems. The study indicates that although air quality has improved through pollution controls imposed on emissions from industrial sites, these gains will be lost through continued growth in the area. Will Medford actually reach the level of growth necessary to use the electricity if before that point the air becomes unbreathable. The implications of this report, Medford-Ashland Air Quality Maintenance Area Evaluation, October 1976, and of the forthcoming air quality profile should be in the final EIS draft.

2. This draft E I S does not address the question of Pacific Power and Light's future distribution plans for this electricity. For one example: The Pacific Power and Light Company has tentative plans for a 500 KV powerline to be completed in 1981 from Roseburg to Eugene, and another 500 KV powerline to be completed in 1982 from Medford to Roseburg. These plans seem to indicate that the bulk of this power will be directed to Lane County. If this is indeed the case, it seems less tenable that the powerline should be built to Medford instead of along a more direct route to Lane County, such as using the existing corridor through Hines to Salem, Oregon. The Medford - Ashland - Grants Pass area could then be served through upgrading existing powerlines from Lane County. This plan would have comparatively less environmental impact and was thoroughly ignored by your document.

3. CEQ guidelines emphasize that fully developed alternatives for the decision-making process are crucial when unresolved conflicts appear concerning alternative uses of available resources. Such a rigorous exploration of alternatives is not evident in this E I S. The most serious defect is the lack of an alternative route around Klamath Basin, an area with the highest concentration of birds in conterminous United States. The DEIS at page III-58 states that the proposed line "would cross the major portion of the migration route for nearly 5 million waterfowl and thousands of other migratory birds that move through Klamath Basin. In addition, many daily feeding flights of resident waterfowl would pass across the proposed right of way." Without a fully developed alternative route, this EIS has failed to satisfy the National Environmental Policy Act's requirements. Upgrading existing transmission facilities is barely mentioned although it is stated "(T)his alternative would virtually eliminate the majority of environmental impacts associated with the applicants proposed Midpoint to Medford 500 KV line." Assuming some truth in that statement, this alternative also deserves full discussion.

4. Your EIS indicates that if this project is completed, it is quite likely that within 20 years another 500 KV powerline will be established parallel to the proposed one. Map C of the Appendix should show this second line. This action would result in the establishment of a major power corridor. A project of this magnitude may be unadvisable for an area such as Southeast Oregon which is basically free of major man-made landscape intrusions. Besides the visual intrusion of the lines, construction access roads result in increased legal and illegal game hunting, illegal shooting of raptors such as eagles and falcons, desecration of archeological and historic sites, and environmental deterioration due to increased off-road vehicle use. Also, the cumulative impact on flyways and nesting areas, already of concern, is not discussed at all. Furthermore, the question remains unanswered as to whether still another one of these powerlines will have undesirable induced growth impacts in the Southwestern quadrant of Oregon.

5. There exist many questions about the proposed project's impact upon the wildlife of Southern Oregon and Southwestern Idaho which have not been satisfactorily dealt with by this document. In fact, this draft of the EIS is considerably better at posing questions about the possible adverse effects of this project on wildlife than it is in answering them. Examples follow.

From section III, page 38, "an estimated 190,000 acres of crucial deer winter range, 91,000 acres of antelope range and 22,800 acres of wide horse range could be adversely impacted by people and/or vehicles passing through their ranges." The key word in this passage is <u>could</u>. Obviously the BLM has not done sufficient research on the subject to determine if such "adverse impacts" <u>would</u> result or not.

This draft goes on to say that the proposed project would pass directly across the migratory flight paths of roughly 90% of the water fowl using the Pacific Flyway (some 5 million birds per year) yet fails to specifically set forth the impacts that the proposed project would have on these birds. Some areas are not mentioned as impacted flyways, such as Harney Basin and the area between Harney Basin and Warner Valley. Needless to say, the yearly passage of these birds through the basins and valleys of South Central Oregon has a substantial impact upon the other plants and animals of the area, not to mention the economic impact generated by the hunters and naturalists who come to this area to take advantage of this natural phenomenon. Again, this document cites examples of how the powerline might affect the wildlife but offers no definitive evidence which shows that there will or will not be a negative impact generated by this line. From comments of Fish and Wildlife experts and from other testimony at the Oregon Public Utility Commission's hearings, it appears numerous persons <u>do</u> expect substantial bird kills from transmission lines, conductors, and

towers. The EIS glides over what is a major controversy. Summary, at least, of the PUC hearing records from Klamath Falls and Medford should be included in the final EIS.

It seems unwise, in a state where tourism plays such a large part in the economy (as it does in Oregon), to make decisions regarding the possible damage to one of our great attractions without having all the facts on the subject intelligently arranged before us. BLM should undertake a research program to determine what effects this project would have on Oregon's migratory waterfowl prior to the filing of the final EIS.

This document also indicates that the loss of riparian cover caused by the construction of this powerline "would have a highly detrimental effect on pheasants and other upland game birds due to loss of nesting, escape and wintering habitat. In any one location this could cause a considerable reduction in local bird populations." Again, the key word here is <u>could</u>. Again, it appears that the answer to this question is unavailable. Again, why has inadequate research been done on the subject?

The Environmental Impact Statement also indicates that the area to be crossed by the proposed project could result in adverse impacts upon the endangered Peregrine Falcon populations of Southwestern Idaho. This species is particularly vulnerable to human intrusion upon its habitat, as are other raptor species, yet BLM refuses or is unable to provide specific information, beyond mere speculation, about the fate of these birds should the proposed project be completed.

Other species which require unintruded wilderness habitat and which would be impacted by the proposed line are the Rocky Mountain Elk, Wolverine and Bighorned Sheep. This draft of the EIS alludes to dangers faced by these animals if the proposed project is constructed but provides no hard information on the subject. More research in this area seems to be in order. Descriptions of specie location seem sparse. At a minimum, counties where species occur should be named and locations given where the different alternative routes cross habitats.

Beyond the discussion of the human impacts upon wildlife due to the proposed construction of this powerline, there exists the issue of corona effects and wildlife. This document asserts that "Corona should be reduced to the fullest extent possible because the effects, particularly upon wildlife, are relatively unknown." We could not agree more with the BLM's findings in this instance. However, how can a document which purports to be an <u>Environmental Impact Statement</u> state that corona effects upon wildlife "are relatively unknown" and provide no elaboration? This subject should be discussed and evaluated much more thoroughly in the final statement.

6. The land over which the proposed powerline crosses is unique and aesthetically valuable and as such is worthy of saving from massive human intrusion. On the basis of the following findings we disagree with BLM's scenic evaluations:

--classification of land seems to be arbitrary, capricious and vague;

--many areas of high scenic value are readily visible from low scenic value lands (examples include Abert Rim, Beatys Butte, Drake Peak, Hart Mountain, Hart and Crump Lakes, Steens Range and Mt. Shasta as viewed from Worden, Oregon)

--discrepancies exist between the draft statement and maps A-3 and B-3 (the statement lists 5 miles of C1 lands near Bruneau Sand Dunes, and 1 mile of A1 land at the Klamath River which are not represented upon the maps)

--the distances represented in the statement do not correlate with the distances represented on maps A-3 and B-3.

7. Some recently protected areas that are mislabeled in impact evaluation sections are Stinking Lake National Research Natural Area and Harney Lake National Research Natural Area.

8. Finally, we noticed that the list of those contacted for review did not include LCDC Committees for Citizen Involvement nor did the draft analyze the proposal with respect to the Oregon Statewide Planning Goals and Guidelines as requested by Governor Straub in his preliminary comments to the study. Enclosed for your use is a list of CCI contacts in counties crossed by the proposed line.

Thank you for the opportunity to comment on the Draft Environmental Impact Statement on PP&L's proposed 500 KV powerline from Midpoint, Idaho to Medford, Oregon.

Sincerely,

Dena Dierker

Dena Dierker

Denton Pearson

Denton Pearson

COMMITTEES FOR CITIZEN INVOLVEMENT

Harney County
Homer Otley, CCI Chairman
Highland Estates, Hines
Phone: 473-6075

Malheur County
Ray Novotny, Extension Agent
City Hall, Ontario, Ore.
Phone: 889-9129

Klamath County
Margaret Wilder, Temp. Chairman, CCI
2930 Miller Island Road, Klamath Falls, Ore. 97601
Phone: 884-8733

Jackson County
Maynard Smith, Chairman, CCI
1843 Birdseye Cr. Rd., Gold Hill, Ore. 97525
Phone: 582-1752

Lake County
Nancy Bogardus, CCI Member
111 S. "E" Street
Lakeview, Ore. 97630
Phone: 947-4206

OREGON ENVIRONMENTAL COUNCIL

2637 S.W. WATER AVENUE, PORTLAND, OREGON 97201 / PHONE: 503/222-1963

October 27, 1976

Mr. Murl Storms
Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

109

Dear Murl:

Enclosed are the comments of the Oregon Environmental Council on the Draft Environmental Impact Statement for the Pacific Power and Light Company Proposed 500 KV Powerline from Midpoint, Idaho to Medford, Oregon.

We appreciate the opportunity to submit these comments and we are especially appreciative of the extension of the deadline to November 1. We hope these comments will be useful in the preparation of the Final EIS and request that they be made part of that document.

Sincerely,

Larry Williams
Executive Director

Enclosure
LW:alh

A.F.T.E.R., Tigard
AMERICAN ASSOCIATION OF UNIVERSITY WOMEN, Forest Grove Chapter
Portland Chapter
AMERICAN INSTITUTE OF ARCHITECTS
Portland Chapter
Southwestern Oregon Chapter
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS
Oregon Chapter
ANGLERS CLUB OF PORTLAND
ASSOCIATED GENERAL CONTRACTORS OF AMERICA
AUDUBON SOCIETY, Portland, Central Oregon, Corvallis
BAY AREA ENVIRONMENTAL COMMITTEE
Coos Bay
CHEMEKETANS, Salem
CENTRAL CASCADES CONSERVATION COUNCIL
CITIZENS FOR A CLEAN ENVIRONMENT
Corvallis
CITIZENS FOR BETTER GOVERNMENT
CLATSOP ENVIRONMENTAL COUNCIL
EAST SALEM ENVIRONMENTAL COUNCIL
ECO-ALLIANCE, Corvallis
EUGENE FUTURE POWER COMMITTEE
EUGENE NATURAL HISTORY SOCIETY
FRIENDS OF THE EARTH
GARDEN CLUBS of Cedar Mill, Corvallis, Eastmoreland, Fir Grove, McKenzie River, Nehalem Bay, Portland, Scappoose, Villa
GOOSE HOLLOW FOOTHILLS LEAGUE
JUNIOR LEAGUE, Portland
LEAGUE OF WOMEN VOTERS
Central Lane
Coos County
McKENZIE FLYFISHERS, Eugene
McKENZIE GUARDIANS, Blue River
MT. HOOD COMMUNITY COLLEGE OUTDOOR CLUB
NORTHWEST ENVIRONMENTAL DEFENSE CENTER
NORTHWEST STEELHEADERS COUNCIL OF TROUT UNLIMITED, Corvallis, Tigard, Willamette Falls
OBSIDIANS, INC., Eugene
1,000 FRIENDS OF OREGON
OREGON BASS AND PANFISH CLUB
OREGON FEDERATION OF GARDEN CLUBS
Pioneer District 13
OREGON GUIDES AND PACKERS, Sublimity
OREGON LUNG ASSOCIATION
OREGON PARK & RECREATION SOCIETY
Eugene
OREGON ROADSIDE COUNCIL
OREGON SHORES CONSERVATION COALITION
O.S.P.I.R.G.
PLANNED PARENTHOOD ASSOCIATION, INC.
Lane County
Portland
PORTLAND RECYCLING TEAM, INC.
P.U.R.E., Bend
REED COLLEGE OUTING CLUB
Portland
SANTIAM ALPINE CLUB
Salem
SELLWOOD-MORELAND IMPROVEMENT LEAGUE, Portland
SIERRA CLUB
Pacific Northwest Chapter
Columbia Group, Portland
Klamath, Klamath Falls,
Mary's Peak, Corvallis,
Mt. Jefferson, Salem,
Rogue Valley, Ashland
SOLV
SPENCER BUTTE IMPROVEMENT ASSOCIATION
Eugene
STEAMBOATERS
SURVIVAL CENTER, U. of O., Eugene
TEAMSTERS FOOD PROCESSORS
THE TOWN FORUM, INC.
Cottage Grove
UMPQUA WILDERNESS DEFENDERS
WESTERN RIVER GUIDES ASSOCIATION, INC.
WILLAMETTE RIVER GREENWAY ASSOCIATION

COMMENTS OF THE OREGON ENVIRONMENTAL COUNCIL
ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT,
PACIFIC POWER & LIGHT COMPANY PROPOSED 500 kv
POWERLINE FROM MIDPOINT, IDAHO-MEDFORD, OREGON

OCTOBER 27, 1976

The Oregon Environmental Council appreciates the opportunity to submit its comments on the Draft Environmental Impact Statement for the Proposed PP&L Powerline, Midpoint to Medford.

The National Environmental Policy Act of 1969 instills in every agency a responsibility to take the initiative of considering environmental values at every distinctive and comprehensive stage of the process beyond the staff's evaluation and recommendation. We commend the Bureau of Land Management's (BLM) efforts in complying with this mandate in requiring a bonding procedure to be followed by PP&L. The BLM permit for right-of-way would contain language which would require PP&L to provide a bond to insure all stipulations (mitigating measures) of the permit would be properly executed or BLM would be provided with an adequate sum of money to take appropriate corrective actions. This bond is to remain in effect until completion of the line and until released by the Secretary of Interior. The criteria for release of the permittee from the bond ought to be specificed in the EIS. For example, the permittee is to furnish the agency with a rehabilitation plan to be reviewed by the authorized officer after the first growing season. This indicates at least one year's time is necessary for evaluation of compliance. This timetable ought to be addressed in the EIS.

GENERAL COMMENTS

The following comments are based upon the Council on Environmental Quality's Guidelines on Preparation of Environmental Impact Statements, Code of Federal Regulations, Title 40, Chapter V, at Part 1500.

I. The interrelationships and cumulative environmental impacts of the proposed action and other related Federal Projects shall be presented in the EIS. The amount of detail provided in such descriptions should be commensurate with the extent and expected impact of the action, and in order to insure accurate descriptions and environmental assessments site visits should be made where feasible.

A.) A variety of significant cumulative effects brought on by this proposed power line have not been discussed in sufficient detail, if at all. Throughout the DEIS mention is made of the probability of an additional transmission line being constructed along the proposed right-of-way (ROW) at some time in the future. Given the fact that

the proposed line only meets the projected needs of the market area until 1983-1984, the likelihood of an additional line appears to be a foregone conclusion. How else will the permittee meet its market demands? This, coupled with Oregon State law which would allow an extension of the ROW up to 500' per mile without the need for further public hearings on permits to be granted, strengthens the likelihood that a major power corridor will be established. Since this corridor's future existence appears certain, the environmental effects of a one-quarter mile wide swath cut across Western Idaho and Eastern Oregon must be addressed at this time while it is still early enough in the decision making process to make a rational choice between economic and social costs and environmental hazards.

B.) Site visits have clearly not been made to many areas of archeological significance. Similarly, no visits have been made to determine the existence of endangered species along the proposed route. Although BLM is again to be commended on the measures required of the permittee to mitigate any damage should it come across valued archeological sites or endangered species, no reason is given why site visits were considered not feasible and thus not carried out. The NEPA process is intended to elicit public response on all areas of decision making in considering a proposal. The process utilized here removes the public input and substitutes agency expertise. This is contrary to NEPA's substantive requirements.

II. Agencies should take care to identify population and growth characteristics of the affected area and any population and growth assumptions used to justify the project or to determine secondary population and growth impact resulting from the proposed action and its alternatives. The DEIS fails to identify such population characteristics of its market area. It does identify impacts caused by temporary population increases in local areas due to construction activity, but makes no attempt to quantify impact on population within the market area for the years that a surplus of power would be available.

Secondary effects on the environment must be included in the EIS. The construction of this powerline is bound to stimulate secondary effects in the form of associated investments and changed social and economic activities. An assessment must be included of the effects upon the resource base, including land use, water and public services in the market area.

III. The DEIS fails to address adequately the relationship of the proposed land use plans, policies and controls for the affected area. For example, the DEIS states on II 132, "At the present time, it appears few of these planning efforts [by state, federal, regional, county, and local governments] have led to zoning ordinances, controls or constraints that are in effect for lands crossed by the proposed 500 KV Powerline." The DEIS makes no mention of Oregon's Comprehensive

Planning Coordination Act - ORS 197.015. This statute creates the Land Conservation and Development Commission in an attempt to deal with the problems of uncoordinated use of lands within the state. The Legislature found that to insure the highest degree of livability in Oregon, orderly development must be pursued. The Act mandates the LCDC to establish planning goals and objectives to be applied by state agencies, cities, counties, and special districts. Cities and counties are to adopt comprehensive plans consistent with statewide planning goals and guidelines established by LCDC. Additionally, no activity which the state may regulate or control on federal land shall be undertaken without a permit issued by the LCDC pursuant to ORS 197.395.

The DEIS is clearly inadequate in its failure to address the relation of LCDC plans and objectives as incorporated in local planning and the impact that construction of the proposed powerline would have on such plans.

IV. The alternatives presented are inadequate to meet NEPA's requirement of providing for a rigorous exploration and objective evaluation of the environmental impacts of all reasonable alternative actions, particularly those that might enhance environmental quality or avoid some or all adverse environmental effects. For example, the DEIS states on VIII-235 that it may be possible to upgrade and/or replace existing transmissions capability. This alternative would virtually eliminate the majority of environmental impacts associated with the proposed 500 kv line. The four lines devoted to this alternative are clearly insufficient to meet NEPA's mandate to "study, develop and describe" all reasonable alternatives. If studies have not been done on the feasibility of upgrading present capacity they must be pursued and included in the Final Impact Statement. Only then would decision makers be given the rational choice between different alternatives that NEPA requires.

As all reasonable alternatives must be considered in an impact statement, the instant draft is inadequate in failing to consider routing the section of the proposed line from Malin to Medford along an already existing 230 kv right-of-way through the Klamath Basin. This would have the highly beneficial effect of avoiding potential interference with waterfowl migration in this highly sensitive wildlife refuge.

Consideration and presentation of the above mentioned alternatives are essential in allowing for reasoned decision making on the part of BLM. If said alternatives are not fully developed in the Final Statement, it will fail under both NEPA Section 101 and Executive Order 11514 (35 FR 4247) of March 5, 1970 which mandate Federal agencies to plan, protect, and enhance environmental quality.

V. OEC believes Alternative I provides the means of avoiding major environmental conflicts in the Lake County region, Oregon. This route would have the favorable effect of routing the line north of the Warner Valley and avoiding concentrations of migrating birds.

After consultation with the U.S. Fish and Wildlife Service, OEC supports the need for full consideration of an additional alternative route through Idaho. This would pass from Midpoint, Idaho to Substations in Boise, Mora and Ware, and then to Walter's Ferry. West from Walter's Ferry this route would follow Alternative Route II as described in the DEIS. This route would have the beneficial effect of only crossing the Snake River once and following closely to an existing right-of-way almost all the way to Walton's Ferry.

SPECIFIC COMMENTS:

IV-3 Although it may be realized that archeological site looting may be expected by construction workers and that permittee will make its employees aware of the "Rules of Conduct on National Resource Lands" as stated in 43 CFR 6010.2, BLM should specify what response it will take to infractions of said rules.

IV-11 Mitigating Measure No. 22 -- To promote a policy of highest possible environmental protection, the line should read, "Authorizing officer shall (instead of may) require Grantee to relocate the proposed transmission line facilities in order to avoid destruction of archeological, paleontological or historic values or delay construction until salvage operations are complete.

IV-14 The proposed ROW poses a direct threat to the Owyhee River's consideration under the Wild and Scenic Rivers Act. The Act under Section 5(s) affords study rivers the same protection against development for a five year period as it does designated rivers. The unresolved questions concerning transmission lines and the Wild and Scenic Rivers Act must be resolved as the proposed powerline deals with a river of National significance.

The reasons for not requesting the US Attorney General's office or Federal District Court to issue a memorandum opinion on this issue must be discussed. 16 U.S.C. Section 1271, "Congress declares established national policy of dam and other construction at appropriate sections of the rivers of the U.S. needs to be complimented by a policy that would preserve other related rivers or sections thereof to protect the water quality of such rivers and (emphasis added) to fulfill other vital national conservation purposes."

IV-12 Mitigating Measure No. 23 -- In stipulating no roads to be constructed in roadless, archeologically sensitive areas, there exists a major contradiction with statement on VI-3 where the need for an adequately roaded "highway" along the probable multiple use corridor is stated.

Logically, there can be no "highway" if archeological and roadless areas are to be protected. But if such "highway" is necessary, then apparently the roadless areas and archeological sites are not to be protected.

This major discrepancy points to the critical need for this or an additional EIS to address the cumulative effects of issuing a ROW for the initial proposed 500 kv line.

V-1 Discussion of Air Quality should be amended to discuss air quality as it exists in the Rogue River and Medford areas, the limits they face in accepting more growth, and the effects of such further growth as anticipated in VI-8 should be discussed here.

V-4 Amount of sedimentation that could occur and its effects on water quality are significant. If site specific information does not exist, it should be obtained and included in the EIS. Consultation with State and local government bodies as to the degree of degradation allowable due to sedimentation must be undertaken and included in the EIS.

V-6 It is essential to approval of any of the alternative routes that ORV's not be allowed to use the 194 miles of temporary roads constructed, as such use would allow for excess hunting pressure and harrassment of wildlife. If ORV's are allowed to use entire ROW, 689,280 acres of wildlife habitat would be opened up and adversely affected. Mitigation measures must be enforced so as to avoid excessive pressure on wildlife habitat. V-7 at paragraph 3 states use of the ROW by ORV's cannot be prevented. OEC suggests there must be measures of prevention, i.e. aerial surveilance at the cost of the permittee, and these should be fully developed in the EIS.

V-9,10 Even with full mitigative measures, damage and destruction would occur to archeological sites and resources. They are "unique, nonduplicable, and are vulnerable to all levels of ground disturbing activities." The serious flaw with the entire DEIS is frequent statements of the nature of "the extent and degree of archeological impacts, and consequently the unavoidable adverse impacts, cannot be determined until a detailed ROW is made." The DEIS fails to recognize that by the time a detailed inventory of the ROW is made it will be too late to decide if the damage is too great to go forward. NEPA's mandate is to make decisions on the basis of foresight, not hind sight as proposed here.

VI-6 In all probability, the proposed ROW would reduce esthetic and recreational productivity through introduction of additional transmission and utility lines in the future. "The proposed ROW must (emphasis added) be considered to represent a major east-west activity corridor with multiple long-term recreation and esthetic effects."

The entire EIS must be either rewritten or a new one issued to accommodate this analysis. This is the precise point where courts have held an EIS to be required on a future development, i.e. a point in time not too early to determine the effects of the proposal but not too late to affect decision making policy. (See Calvert Cliff's Coordinating Committee, Inc. v. A.E.C., Nos. 24,839 and 24,871 (D.C.Cir. July 23, 1971)).

VI-8 Since it appears that provision of additional power to the market area would be beneficial in the short term but could be adverse in the long-term with respect to socio-economic values, how can the proposal be allowed to proceed if its admitted long-term socio-economic effects are adverse?

VI-3 The greatest overall long-term effect of opening up 248,320 acres of remote areas to accelerated public use is that "This would result. . .in too much (emphasis added) hunting pressure, harrassment of game, non-game and possibly threatened or endangered species. . . decreasing or eliminating wildlife populations."

Since the DEIS acknowledges that opening this vast area would subject it to too much pressure, measures to deny access to human use must be provided for and enforced.

VII-2 Need to define the irretreivable commitment of archeological values to exploration and investigation under current procedures is indicated.

There is also a need to define which primitive and backcountry areas that project would prohibit or limit.

VII-4 This section presents the only discussion of secondary impacts on socio-economic factors. The Draft states that as a result of increased available electrical energy some irretrievable changes would occur in the market area, i.e. increased industry, population, etc. It states that such changes due to the incremental energy increase made available by the proposed project cannot be identified. Why not? Was there any attempt to do so? Attempts have been made at determining this type of change, i.e., See Appendix I, An Energy Demand Forecast Model for the State of Oregon and Appendix II, Demographic and Economic Forecast and Scenarios for the State of Oregon, Department of Energy - Future Energy Options for Oregon" July 1, 1976.

If BLM feels compelled to issue an easement to PP&L, the Oregon Environmental Council would strongly urge adoption of Alternative Route I, the most northerly route, with new alternative routes granted from Malin to Medford along the existing ROW, and from Midpoint to Walton's Ferry as outlined in our general comments.

OEC criticizes the DEIS for not fully developing the alternative of upgrading existing lines and utilizing existing corridors. The final impact statement must describe this alternative in detail. OEC urges the BLM to adopt this alternative and reject the proposed plan unless it appears unfeasible after detailed consideration.

We appreciate the opportunity to submit these comments and hope they will be useful in the formulation of the Final Environmental Impact Statement. We ask that they be included in the Final EIS.

OREGON ENVIRONMENTAL COUNCIL
2637 SW Water Avenue
Portland, Oregon 97201

222-1963

Submitted to:

OREGON STATE DIRECTOR
BUREAU OF LAND MANAGEMENT
PO Box 2965
Portland, Oregon 97208

October 27, 1976

VS:alh

United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

RJ 10/24/76

IN REPLY REFER TO:

OCT 1 : 1976

L7619-460

123

Memorandum

To: Director, Bureau of Land Management

Through: Assistant Secretary for Fish and Wildlife and Parks

From: Associate Director, Management and Operations

Subject: Review of draft environmental statement for Pacific Power and Light Company Proposed 500 KV Powerline, Midpoint, Idaho-Medford, Oregon (DES 76-32)

We have reviewed the subject statement and have the following comments.

It appears to us that there are routes, other than the proposed route, that provide greater protection to the environment. For example, Alternate Route I would require fewer miles of new right-of-way than the proposed route (Table VIII-79). This means less land area will be damaged by the project.

We are also very concerned about esthetic impacts of the project. We feel that if the proposed powerline utilized a greater portion of existing right-of-way, the visual impacts could possibly be reduced. Existing utility corridors and right-of-way have already been visually altered, so the introduction of another power line will not create significant additional impacts on these areas.

John E Cook

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Mr. Murl W. Storms
Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

October 31, 1976

125

Dear Mr. Storms:

As a recipient of the Draft Environmental Impact Statement (DEIS) and observer at the September 27, 1976 hearing in Medford, Oregon, the Rogue Ecology Council submits the following comments on the proposed 500 kv transmission line of Pacific Power & Light Company between Midpoint, Idaho and Medford, Oregon.

1) The DEIS is burdened with excessive repetitive detail in regard to the proposed route and the four alternatives from Midpoint to Malin and two alternatives from Malin to Medford. Because an assessment of this voluminous material is beyond these individuals' resources in a public inquiry, your agency is obligated to present a more comprehensive approach to extracting the "facts" of environmental impact as opposed to "interpretation by experts".

2) Questions have arisen as to the utility's claimed need for the electric power, carried from the Wyoming generation complex to the Bonneville Power Administration intertie (The Dalles to Los Angeles), which the proposed line crosses at Malin, Oregon, and to existing and potential customers in the Southern Oregon/Northern California region. Preliminary Oregon Department of Energy 20-year baseline forecasts have projected electricity usage to grow only slightly during that period. Data from "independent public agencies" on energy supply and demand forecasts have not been evident in this DEIS, which would provide a more even-handed approach to estimating future consumption.

3) The DEIS gives a very fragmentary discussion of other sources of electric power accessible in the load area, which would be potential replacements for the line in meeting the utility's claimed need. The section from pages VIII-218 to VIII-230 is not an adequate discussion of "alternatives to the proposed action", as provided for in the National Environmental Policy Act (NEPA), since the only source of information quoted is the Bonneville Power Administration.

4) The "reduction in market demand" section, pages VIII-230 to VIII-235, is even more sketchy, and does not give even a minimum degree of attention to the "energy efficiency" benefits that would accrue to these and similar alternatives. Again the Bonneville Power Administration is given as the only reference, so the lack of an inclusive approach to these aspects is evident.

5) The final "no line" alternative of "upgrading existing transmission facilities" is given an incredibly miniscule <u>eight</u> lines on page VIII-235. It is incomprehensible that such an alternative, accepting the claimed need for the electric power, was not given near equal billing to the proposed line and its variations. Here the whole purpose of the environmental impact process has been compromised, and in fact damages the credibility of your agency's procedures. Why did your agency fail to dwell on this alternative in the detail

it deserves, or at least seek the necessary information from the electric power producers and distributors with the same degree of diligence as you exhibited with the proposed transmission corridors?

In conclusion, the above-stated deficiencies in the DEIS, in particular 5), warrant a more intensive effort to achieve the standards for an environmental impact statement set by NEPA and its interpretations by the courts. A good-faith initiative to seek all the answers on the alternatives is critically needed.

The Bureau of Land Management has the resources and access to information to do it; does it have the self-motivation to see that it happens? If the proper environmental impact process is carried out, then a better-managed and more responsible public input activity on the energy issues raised by the proposed project can result. It is up to you to provide the leadership!

The Rogue Ecology Council
Southwestern Oregon
1385 Anderson Creek Road
Talent, Oregon 97540

SIERRA CLUB . . *Pacific Northwest Chapter*

FOUNDED IN 1892

October 29, 1976

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

126

Dear Sir:

The Pacific Northwest Chapter of the Sierra Club finds inadequate the DEIS pertaining to the proposed PP&L 500 KV Power Line to extend from Midpoint, Idaho to Medford, Oregon. The three general areas of inadequacy concern the cumulative effects of the proposed line, land use conflicts, alternatives to building the line, and route alternatives.

The CEQ's Guidelines for EIS preparation require presentation of interrelationships and cumulative environmental impacts of the proposed action; require discussion of how the proposed action may conform or conflict with objectives and specific terms of federal, state and local land use plans, policy and controls; require consideration of secondary or indirect consequences for the environment; require alternatives to the proposed action; and require discussion of irreversable and irretrievable committment of resources.

The Sierra Club, however does commend the BLM in the DEIS for developing the bonding procedure to insure that mitigating measures are executed as proposed. It would, perhaps, be well to detail the procedure for evaluation of such mitigating measures.

Cumulative Effects

1. The environmental impacts of the coal mining and generation which precede the transmission problem have been assessed in the Powder River EIS (1974) and the Jim Bridger EIS (1971). A summary of the impacts of this mining and generation should be included for consideration in this DEIS. As the market for this transmitted electricity is considered, so the source of the electricity should be considered.

2. The environmental impact of the transmission right-of-way, should it become a "multiple project corridor in the future," must be assessed. The cumulative impact of both the proposed 175 foot right-of-way plus the potential for additional transmission through a wider corridor should be considered. Once the line is constructed it easily becomes a de facto power corridor. This is particularly true in Oregon as additional lines could be added under ORS 469 within 500 feet of the existing corridor without any review by the Oregon Energy Facility Siting Council. While limiting review by the state Council, this does by inference affirm the general policy of siting transmission lines in already existing corridors. The aggregate impacts of a potential power corridor must be considered.

3. The additional impact, should the region through which the line passes yield commercial quantities of electricity from geothermal

resources, must be considered. This potential must be described and addressed.

Land Use

1. In the State of Oregon the planning goals and objectives of LCDC are virtually ignored, much less addressed as to compliance or conflict. The potential for Fasano-type hearings in the impacted counties prior to granting or denying Conditional Use Permits for transmission line construction is never raised.

2. Suggestions for resolution of the conflicts with various BLM MFP's are not presented. A number of these MFP's develop policy toward planned utility corridors, use of existing corridors, holding patterns for roadless areas, etc..

a. Twin Falls MFP routes power lines adjacent to existing lines whenever possible;
b. North and Central Malheur MFP identifies right-of-way corridors;
c. Harney County has a general utility corridor policy;
d. West Owyhee MFP identifies right-of-way, mostly with existing lines; and further suggests that roadless areas be protected until further management policy be developed. The conflict this policy raises with the Boulder Creek and Toy Mountain Back Country Study Area and the proposed route is neither discussed nor resolved.

Secondary Effects

Since one of the purposes of the line is to provide power to the Medford-Grants Pass region of Oregon, the impact that the line will make on this area in terms of secondary growth must be considered.

1. Questions of optimum population growth in Josephine and Jackson Counties are neither raised nor addressed.

2. The ability of this region (the Market Area) to finance and develop the essential services for the predicted population growth is not discussed.

3. No where does the DEIS investigate the possible physical constraints of the region's airshed or watershed to the predicted population growth in the region. Market area population data and industrial growth are only half-heartedly analyzed and then projected as though endless growth were possible.

   The Oregon DEQ in a news release, September 9, 1976, said that as well as being declared a "non-attainment area for particulate air pollution," this area is facing an ozone problem as well. This airshed problem might well become a real constraint to population growth and hence energy demand of the region.

Alternatives

1. No Action Alternative. The DEIS presumes that the alternative t building the proposed power line, i.e., the "no-build" alternative, would be the absence of environmental impact and an energy deficit in the market area.

   a. If the market area is considered Southwest Oregon, why is there no analysis of the relationship between population, per capita income growth and energy demand for that particular area.

      1. A deficit of 273 MW by 1985 is forecast. No explanation is given in justification of this forecast beyond that of "past trends." There are available several projection methods for determing electricity demand. None of these alternative methods nor conclusions are presented.

      2. The assumption that the power must be transmitted directly to Southwestern Oregon is no where justified. The possible alternative of transmitting power to the Willamette Valley sink directly and then building additional transmission facilities (even suggested on BPA transmission facilities projections) to the south from the Willamette Valley is not presented.

   b. If the primary purpose of the line is to provide a means of transporting surplus electrical energy from Wyoming generation to western load centers, the questions again arises as to the reliability of the energy demand forecast -- as to the need for the line, as to the timing of the construction of the line, and as to the terminus of the line. Weak phrases justifing the line because of a one shot deficit forecast and the threat that the lack of the line will slow economic growth and development and produce general deterioration of the quality of life are only meaningful when backed up with data.

2. Reduced Market Demand Alternative. Data is now specifically available as to the potential of the conservation alternative for the reduction of energy demand in the Pacific Northwest Region. Should either the Medford-Grants Pass region or the PNW region reduce its energy demand, as suggested by the Skidmore, Owings and Merrill Report to BPA, the timing, if not the need itself, for the line might be different.

3. Load management by utilities with a particular eye to peak loads are not discussed. This option is being used by other utilities as a means for decreasing the need for generation and in this case of additional transmission facilities.

4. The reliability factor is seldom discussed but yet would offer the public and the utilities another option for reviewing new generation or additional transmission facilities as against a risk factor of decreased availability of electricity. What is this factor? What would be the calculated risks if this factor were decreased?

Route Alternatives

As mentioned elsewhere, the route alternatives utilizing already existing transmission corridors are not considered. NEPA requires vigorous exploration of all alternatives, particularly those providing fewer adverse environmental effects. Upgrading of existing facilities, for example, was the utility's own option between Borah and Midpoint.

The lack of route alternatives is particularly reprehensible in the Klamath Basin segment of the line -- thousands of words were expended during the Oregon PUC hearing on this very issue; yet some of the alternatives proposed during those hearings are not even mentioned.

That the Idaho State Department of Fish and Game would oppose the proposed segment through the Owyhee area and the DEIS should offer no alternative is incredible.

Some proposals for mitigating measures can only suggest alternative routes. For example, a road in a roadless area cannot be mitigated -- the area can only be avoided with an alternative route. An archeological site, once disturbed, has suffered "unavoidable adverse impacts" and those impacts cannot be mitigated. The site can only be avoided. Rare and endangered species must be identified prior to, not after, a route is selected. BPA is currently following this policy. Species damage cannot be "mitigated."

Mitigation is, of course, necessary; but it is not a universal solution to adverse impacts. The one area which we feel requires stringent mitigating measures is the potential for nearly 200 miles of temporary roads becoming accessible to ORV's. The responsibility for preventing this must rest squarely with PP&L. This responsibility and the implementing program must be clearly stated in the DEIS.

SUMMARY

In summary, the Pacific Northwest Chapter of the Sierra Club argues that the DEIS, at present, is inadequate primarily in not considering the problems of cumulative impact, in not analyzing and resolving land use conflicts, in not considering alternatives to the construction of the line, in not considering the long-term problems of secondary growth, and finally in not investigating and presenting route alternatives.

We recommend that the BLM redraft its present DEIS and present the results to agencies and the public for realistic input prior to the preparation of the final EIS.

Respectfully submitted for the record,

Diane Meyer

Diane Meyer, Chairman
Pacific Northwest Chapter
Sierra Club
419 Pearl Street
Medford, Oregon 97501

125 NW 35th Street
Corvallis,OR 97330
October 29, 1976

Oregon State Director
Bureau of Land Management
P. O. Box 2965
Portland, Oregon 97208

128

Gentlemen:

SUBJECT: Comments on DEIS, Proposed PP&L 500KV Power Line
Midpoint, Idaho to Medford, Oregon

In previous statements (see attached letters May 15, 1975, and March 10, 1976) I have expressed my concern of the proposed route of the PP&L transmission line. My comments were directed towards one segment of the proposed route crossing an area referred to as the Narrows in Warner Valley, eastern Oregon.

I spent all or parts of five summers in Warner Valley beginning in 1972, collecting information on the population of White Pelicans found in this area. I am extremely concerned about the potential impact of PP&L's proposed project on the White Pelicans in Warner Valley and the associated water birds which also occur there (e.g. Double-crested Cormorants, Great Egrets, Great Blue Herons, Snowy Egrets, California and Ring-billed Gulls, and numerous species of waterfowl). Though my comments are directed towards the Warner Valley segment of the proposed route, I feel that they reflect the many unknown problems facing this project and the lack of consideration given to many species of flora and fauna along the 483 mile proposed route.

In particular, I wish to comment on four areas of the DEIS. These areas are:

1. Inconsistencies and inadequacies in material presented in DEIS.

2. Poor treatment of information regarding unique, localized populations of birds (e.g. White Pelicans).

3. The suitability of mitigating measures.

4. Lack of thoroughness in the literature review and literature cited.

Inconsistencies and Inadequacies

In my opinion the DEIS fails to fully pursue material pre-

sented in the report, presents material that is misleading to the reader, and fails to resolve problems with controversial portions of the route.

For example, the following statements found in the DEIS indicate the route crosses marsh type area at the narrows:

> Page II-46. "Aquatic vegetation occurs in very few places along the proposed right-of-way. However these include some very significant, locally important areas such as Warner Valley."
>
> and
>
> Page II-50. "...crosses about 1½ miles of aquatic vegetative type (marsh) between Hart nad Crump Lakes."
>
> and
>
> Page II-51. "Aquatic (marsh) lands are crossed only in the Warner Valley area and comprise less than 1% of the proposed right-of-way."

A fourth statement appears on page II-56 which conflicts with the above:

> Page II-56. " No aquatic (marsh) areas would be directly crossed by the proposed right-of-way but it would be immediately adjacent to marsh areas in the klamath basin vicinity."

The DEIS is based on inadequate records of wildlife populations.

> Page II-60. "Unfortunately the numbers and distribution of the wildlife species found along the proposed right-of-way is known in only a few instances."

It is difficult to conceive of an adequate Final EIS based on poor distribution and population records of wildlife species.

Tables II-20 and II-21 page II-78 consider some wildlife species typical of aquatic habitats crossed by the proposed route. In regards to birds, White Pelicans, Double-crested Cormorants, Ring-billed gulls, and Snowy Egrets are typical of aquatic (wetland) habitat crossed by proposed power line. These birds are not included in the table.

The Warner Valley is presented in the DEIS as having out standing features (page II-138), unique topographic qualities and high scenic value (page II-157), free of major man-made landscape features (page II-161), highest sensitivity and scenic quality ratings (page II-169), being nationally recognized in importance to wildlife (page II-89), being one of the most vulnerable areas along the proposed right-of-way (page III-51), power line crossing

at narrows would represent an inharmonious natural landscape intrusion (page III-95), and yet, with all this in mind there is no strong statement of recommendations regarding this area. Controversial areas such as the narrows must receive fuller treatment in the Final EIS.

Finally, the DEIS inadequately treats species that are protected, rare, and/or endangered according to state and federal listings. There is no indication that the Audubon Blue List was considered or Marshall's report on birds (see attached Blue List, Marshall, D. B. 1969. Endangered plants and animals of Oregon. III. Birds. Special Report 278, Agricultural Experiment Station, Oregon State University, Corvallis. 23 pp.).

Unique,Localized Populations of Birds

The White Pelican is a unique, localized species that is not treated adequately in the DEIS.

> Page II-91. "Pelican Lake, just south of the area that would be crossed by the proposed right-of-way is one of the 2 White Pelican rookeries in Oregon..."

This statement is not entirely correct and leaves out important information relative to this species. I clearly located and mentioned at least 6 individual sites (islands) used by pelicans in Warner Valley for nesting (see letter dated May 15, 1975). Two islands in Pelican Lake are presently used by pelicans as nesting areas. Four additional islands are used on Crump Lake. Three of these are located at the north end of Crump Lake and are in close proximity to the proposed route. Not all areas are used at the same time and may change from year to year as a result of changes in the water level in the lakes.

It is important to remember that this is a remnant population as is the Klamath Basin population. It is not clear where the figures presented on page II-105 (1000 White Pelicans) and page III-58 (1,700 White Pelicans) come from. The numbers appear in disagreement with publications on the status of White Pelicans.

Suitability of Mitigating Measures

At this point the mitigating measures presented by BLM and PP&L are not suitable to adequately protect wildlife resources in the proposed right-of-way.

> Page IV-6. "Human and animal life cannot be replaced, but monetary compensation could be initiated to ease such hardships."

Who will pay if unique birds such as White Pelicans are adversely affected by the proposed project? How much will PP&L be willing to pay? Who will receive the monetary compensation? Will the money go to local, state, or federal agencies or to those of us who may no longer be able to observe species such as the White Pelican? How much will BLM require PP&L to pay for every bird that is killed by the proposed project?

> Page IV-17. "Avoid placement of towers in open expanses of water and marsh lands, particularly those utilized as flight lanes by migratory waterfowl and other birds..."

The problem of towers in vicinity to marsh areas may be mitigated but that in no way clears up the problem of 11 wires that will stretch across the narrows if the proposed route is approved.

> Page IV-17. "No construction or other activities other than surveying will be conducted near crucial wildlife during the period most critical to wildlife species..."

What are crucial wildlife species? It seems to me that deer, antelope, sage grouse, and raptors are not the only groups that should be considered as crucial wildlife species. Colonial nesting birds are also crucial wildlife species and subject to heavy losses of eggs and young when disturbed during the nesting period. In the Warner Valley this period spans late March through August.

> Page IV-47. PP&L states, "special care to protect the habitat of endangered, rare, or protected wildlife willbe exercised."

Who will insure that PP&L lives up to this measure? How will it be enforced?

Literature Review

The DEIS is poorly documented with material related to wildlife interactions with power lines. Pages III-41 and 42 suggest four articles of significance to be mentioned. It appears that the DEIS study team did not bother to search the available literature and read what has been published.

BLM misrepresents the problem when citing the Arend (1970) study. In my opinion this study is clearly biased in favor of the utility companies.

I have attached the covers of articles that I feel should have been read and considered by the study team. Most of these articles are not listed in the literature review section of the DEIS. There omission is indicates a very weak area of the DEIS.

Summary

I have briefly touched on four areas of concern regarding the DEIS.

I feel that questions about the potential impact of the proposed project on wildlife have not been adequately answered by the DEIS. There are very few studies trying to seek the answers to this complex problem. The PUC sponsored study in the Klamath Basin is severly limited by the time span of the investigation. The study is biased towards waterfowl species and neglects the possible impacts on nongame species that migrate south during the fall but may breed locally in the summer.

The only effective way to protect wildlife is to plan preventively, that is, take steps to insure the protection of the wildlife resource before the line is built.

It is disheartening to read in the Lake County Examiner (10/21/76) that PP&L is already clearing right-of-way on the proposed route. I hope this is not the case before the Final EIS is prepared.

Yours truly,

Steven L. Elefant

Enclosures: Letters May 15, 1975, March 10, 1976
Blue List-National Audubon Society
Sources for literature review
Lake County Examiner 10/21/76

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Region 6
P.O. Box 3623, Portland, Oregon 97208

8420

October 29, 1976

130

Mr. Murl Storms
State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Mr. Storms:

In response to the proposed Midpoint, Idaho-Medford, Oregon, Pacific Power & Light Co., 500 KV Transmission Line, DES #76-32, we are providing comments in the following three categories:

1. Ranking and discussion of preferred alternatives.

2. Conceptual comments regarding the DES itself.

3. Specific comments directed toward ommissions, new data, and editorial corrections.

We are also enclosing Exhibits A and B, explained as follows:

A. Chart showing comparative miles traversed from west N.F. boundary, across Goose Lake Valley to east Forest boundary, commercial forest land and miles existing and new right-of-way.

B. Map indicating variation on visual concepts.

1. Discussion and Ranking of Alternatives

We do not believe the DES adequately clarifies the actual inaccessible or undeveloped areas crossed by the various Alternative Routes. We believe this should be summarized in a form similar to that used for indirect impacts on animal herds so that a better comparison of the alternatives could be made by reviewers and the public.

The DES fails to recognize the logical expansion area of the Lakeview Community which is largely to the north; the Warner Mountains on the east and Goose Lake, high water tables and irrigated lands limit expansion to the south and west.

The DES identifies Lakeview. It does not fully consider the 60 to 70 residences from 1/8 to 3 miles from the proposed route, and the current expansion in this direction. Included in this area is the residential community of Goldmohr Terrace, 1.8 miles from the proposed route.

The route proposed by PP&L, incorporating the minor realignment in Goose Lake Valley and Yokum Valley (DES, Ch. VIII, Pages 241-244) would have the least impacts upon the Fremont if National Forest land were the only consideration.

However, the Forest Service preference, if the integrated system analysis called for later in this letter shows the proposed line compatible on a system basis, is for Alternative I, as this route provides the least impacts considering a mix of resources, liveability, and people impacts in Lake County, the town of Lakeview, and areas affected by the proposals within the Fremont's "zone of influence." Alternative I imposes no barriers to the future growth of Lakeview. It mitigates the possible waterfowl collision impacts in Goose Lake Valley and Warner Valley. Alternative I also takes advantage of the existing BPA-PGE corridor; a net of 2.5 miles of "new" right-of-way would cross National Forest land (8.5 miles of "new" right-of-way within the National Forest boundary). Although forest wildlife impacts (excluding big game) score highest on Alternative I, we are of the opinion that the existing lines have already caused most of the impacts, possibly less remain than would occur on a longer "new" right-of-way. Possibly, the existing corridor could be enhanced visually by modification of the present "tunnel" clearing using techniques listed in Chapter IV, mitigating measures. Two of the more scenic areas in Lake County, the Highway 140 Warner Mountain crossing and the Warner Valley crossing with the historic stone bridge and major waterfowl concentrations, would be avoided by Alternative I.

We would rate Alternative III as a second choice, again based primarily on impacts upon people, waterfowl, and aesthetics.

If a numerical weighting were assigned, considering a low score as a first preference, and 10 points as an undesirable rating, our recommendations would be:

1st choice:	Alternative I	1 point
2nd choice:	Alternative III	7 points
3rd choice:	Proposed route	10 points

Alternative II and IV are outside of our area and are not considered.

2. Conceptual Comments

We have two conceptual comments on the visual section of the DES itself. Visual Management guides for both the BLM and Forest Service are developed essentially for wild lands. We believe that these criteria do not adequately meet the visual standards for rural-agricultural areas. With this in mind, we would rate Goose Lake Valley, as of moderate scenic value, instead of low.

Sensitivity levels are based on people, the number, and where they congregate, such as on primary travel routes. The high sensitivity of 140 through Warner Canyon and Camas Valley forms a long lineal form (foreground and middleground reaching up to 5 miles from viewer on both sides of road). It is suggested that this type of sensitivity be considered, mapped, and avoided for a proposed line location. Sensitivity along travel routes should be considered where the powerline crosses roads. This is a high impact point visually and emotionally and it is further intensified as one moves towards and sees for many miles or minutes the "manmade focal point"--powerline and towers. It would be good to consider mapping these areas to find minimum impact points. In short, the sensitivity area should not be restricted to the line itself, but should be considered as a zone which is visible from main travel routes.

3. Specific Comments on PP&L DES.

Ch. II, Page 135. Omits reference to Oregon State Highway 140--Klamath Falls - Lakeview - Winnemucca, Nevada.

Ch. II, Page 136 - third paragraph. Southern Pacific extends from Klamath Falls north AND SOUTH. Probably true of Burlington.

Ch. II, Page 219. Second paragraph under Wildlife. Possible poor summer range should also be considered as a factor.

Ch. III, Page 51. New data on waterfowl use indicates that 200,000 birds feed and/or nest in Warner Valley (Frank Grogan, Oregon Department of Fish and Wildlife).

Ch. III, Page 52, paragraph 2 there is mention of "waterfowl concentrations in Goose Lake Valley." How many birds are in the flights between Goose Lake Valley and Drews Reservoir, Cottonwood Reservoir, and possibly Muddy Creek Reservoir.

Ch. III, Page 93, Table III-26. The table references to Highway 140 crossings on this segment are confusing. I know of only 2 (through Warner Mountains) and (west side of Goose Lake Valley). (Is this third reference confused with County Road 310 to Plush?)

Ch. III, Pages 94-95. No text write-up of Highway 140 crossing on west side of Goose Lake Valley 10 miles west of Lakeview (520 ADT on this segment).

Ch. III, Page 95. No rope tow at Warner Ski Area. The ski area is served by a "T-Bar."

Ch. IV, Page 29 - third paragraph, third line. "It will NOT" prevent environmental damage from fire.

Ch. IV, Page 30, Item 4 - Secretaries of Interior, Agriculture and WAR. Typographical error. (Now "Defense").

Ch. IV, Page 30, Item 6 - Locate to avoid nests, dens or areas key to rare, endangered or threatened wildlife species, plus those species for which an approved Forest biological unit management plan has been prepared. (Osprey, accipiters, pileated woodpecker, bald and gold eagles).

Ch. IV, Page 32, Item 3. We should reserve the right to put date constraints on when road construction, and other aspects of line construction for that matter, can occur because of proximity to accipiter nests when noise and human disturbance may make accipiters nesting just outside the right-of-way abandon the nest (we do the same thing on timber sale contracts), or because of spawning activities by resident trout (also done in sale contracts).

Ch. IV, Page 33, Item 8. Over-the-snow vehicles should be restricted according to approved ORV plan, not just because of wildlife harassment potential.

Ch. IV, Page 36, Item 3. Forest Service states 16 feet as minimum tree height. BLM states 15 feet in Ch. IV, Page 7, Item 8b. These should be consistent between agencies.

Ch. IV, Page 41, Item 17. Installing and maintainING erosion control structures.

Ch. IV, Page 42, Item 22. We should consider a monetary compensation to the Forest from PP&L for reducing existing snags more than 16 feet tall from the right-of-way and precluding the potential for future snag replacements ever. What this means is that adjacent lands will have to be managed for a higher snag density to still meet R-6 and proposed Fremont snag management guidelines. Doing so will mean that these adjacent lands will have a lower potential for wood production as long as the line is in existence, and thus I think PP&L should compensate for this.

Ch. V, Page 1. Mineral Resources. Believe "no adverse impacts would BE EXPECTED" would be a better phrase.

Ch. V, Page 9, Table V-4, Item 5. Believe this figure should be 1272 rather than 1322 acres of forest habitat lost. (329 acres midpoint Malin + 943 acres Malin to Medford).

Also believe this table should be identified as Midpoint-Medford.

Ch. VIII, Page 19. Wildlife first sentence. The word SPECIES after Wildlife would clarify intent of this statement.

Ch. VIII, Page 102. Archaeological and Historical Values. Line would cross about 2½ miles from Emigrant Crossing, a historic wagon train crossing.

Ch. VIII, Page 122. Third line. Fire hazard increase would be minimal because of existing access.

Ch. VIII, Page 123. Third paragraph--esthetics. Forest clearing west of Highway 31 mitigated somewhat at present. Some area non-forest land, other area in old burn.

Ch. VIII, Page 199, Table 73. The differences in AUMs seem very minor for the differences in comparative ratings. Is this a valid Conclusion?

Ch. VIII, Page 200, Table 74. Forest wildlife appears high for Alternate I, considering that a corridor is already in existence and impacts have probably already occurred.

Ch. VIII, Page 205, Table 79. Forestry is omitted from the summary table. It does not appear to be included in vegetation. This is apparently an omission.

Ch. VIII, Alternate Route III. Consider shifting more to north after crossing below Summer Lake to avoid Paisley airstrip.

Map omission. Drake's Flat sagegrouse area is not shown.

Map error on scenery classification map (see enclosure).

Ch. III, Pages 1-129. "Impacts of the Proposed Action" does not address the short and long-term impacts, both primary and secondary, of the proposed transmission line (or lines) upon the integrated Pacific Northwest - Pacific Southwest electrical grid system and its operation. With the large amount of power discussed in Section I-11 as contemplated being transmitted over the proposed

line and through the Malin tie into the system for market elsewhere than the Medford area, it appears there will be very substantial system impacts. The mitigation of these impacts could result in additional transmission capacity becoming necessary, either over existing corridors or new routes. Since the National Forest, because of their location, receive a major share of transmission line impacts in the west, these potential system impacts are of direct concern. We believe it essential that the final ES should discuss these system impacts fully.

We are now studying with various proponents several major power generation and transmission proposals as part of long-range electrical system planning affecting the National Forests in the west. This line is described in Chapter I as a proposed part of this system. However, Chapter VIII treats the proposed line as a separate transmission line with "alternatives" being only alternative routes. We are unaware that the decision has been made that this proposal is acceptable on a system basis. Alternatives examined should include the integrated system alternatives for meeting the Medford load, and other means and routes for transmitting energy to Northwest and California population centers this line is proposed to serve, both short and long-term. This examination should include expanding Chapter VIII 218 to examine the alternatives of additional capacity at the Boardman energy complex or Centralia with coal transported by rail, or slurry pipeline, as well as other existing system alternatives for transmitting Wyoming generated power to Willamette Valley and Puget Sound load centers and particularly California markets which are consuming an even increasing share of system energy. Mr. Harold C. Miles' testimony at the Boise hearing illustrates that other system alternatives should be thoroughly examined. Our letter to you of May 16, 1975, pointed out areas of National Forest impact concern that the ES should examine. These involve Chapters I, III, VII, VIII and IX of the Draft. We ask that you reexamine these concerns and the inadequacy of the above chapters in addressing them.

We are available for any assistance you may desire in analyzing both system impacts and impacts of other alternatives to the proposal.

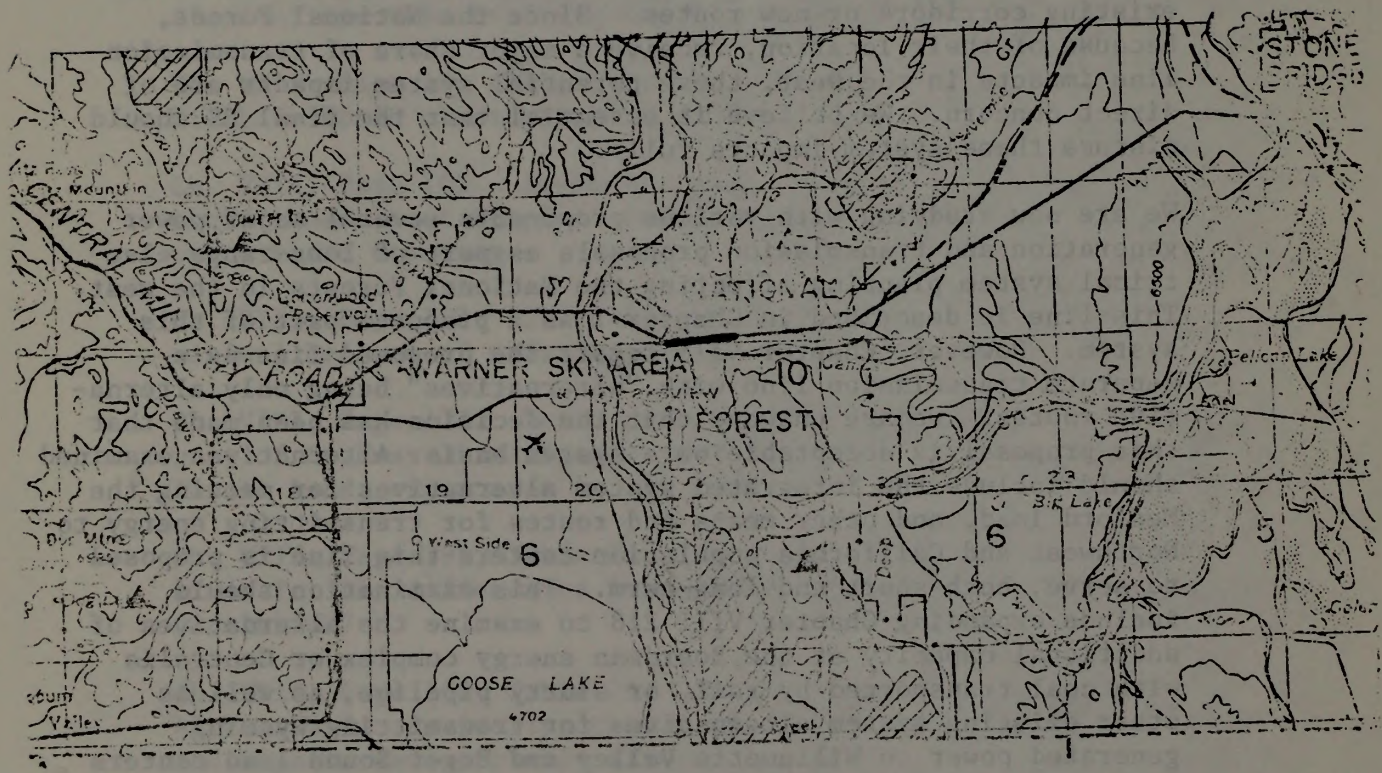
Sincerely,

T. A. SCHLAPFER
Regional Forester

Enclosures

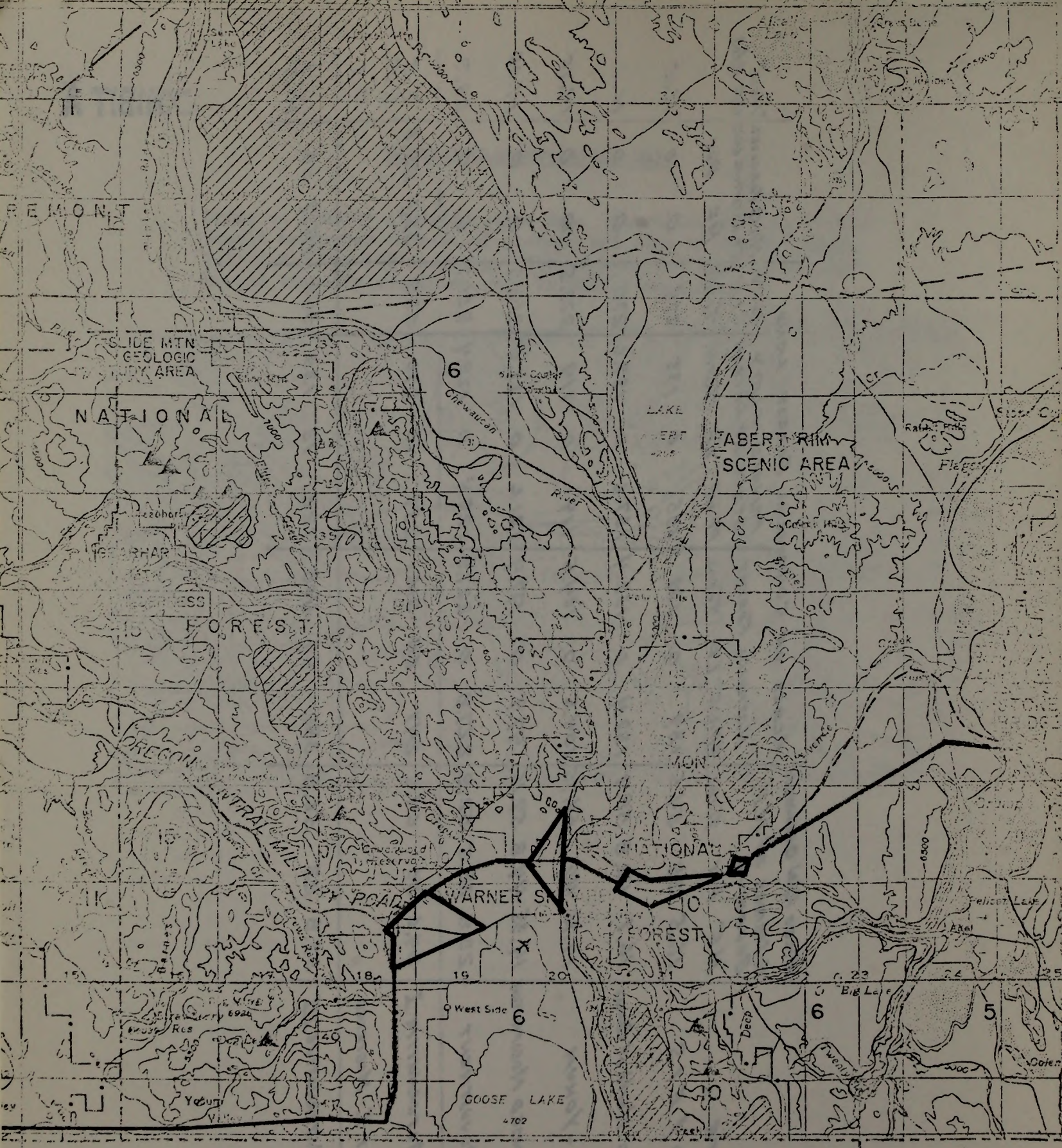
SCENERY CLASSIFICATION MAP

Error on scenery classification map. Sensitivity Level 1 (Red) should be mapped to east of present red line to reflect Camas Valley Highway 140 crossing. The present red line is located beyond visually sensitive area in Warner Mountains.



Route	Miles R/W between Extremes of N.F. Boundary			Acres of Commercial Forest Land							Miles Parallel to Existing Lines		"New" N.F. R/W
				National Forest			Private - BLM & State of Oregon			US & Pvt C.F.L.			
	NF	Pvt	Total	PP-WF	LP	Total	PP-WF	LP	Total	Total	NF	Pvt	
Proposed / EIS	16.5	38	54.5	139	0	139	135	0	135	274	0	0	16.5
Modified - North of Camas	16.1	42.8	58.9	132.4	0	132.4	137.6	0	137.6	270	0	0	16.1
Modified - Yokum	14.75	40	54.75	104.5	0	104.5	119	0	119	223.5	0	0	14.75
Totals - U.S. Proposed Modification	14.35	44.8	59.15	97.9	0	97.9	121.6	0	121.6	219.5	0	0	14.35
PP+L Adjustment	23.8	28.5	52.3	227.8	0	227.8	128.4	0	128.4	356.2	0	0	23.8
North Alternative I	34.6	30	64.6	247	68	315	257	13	270	585	32.1	55.5	8.5 8.6
North Alt I - Modified													8.7
Central Alternative III	33.8	23	56.8	336	69	405	122	13	135	540	15.7	36	18.1 20.5

EXHIBIT A



A SUGGESTED METHOD OF SENSITIVITY LEVEL I VISUAL OR SCENERY CLASSIFICATION

EXHIBIT B

121° 120°

212

Scale 1:500,000

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Region 6
P.O. Box 3623, Portland, Oregon 97208

8420

April 5, 1977

Mr. Murl W. Storms
Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, Oregon 97208

Dear Mr. Storms:

This letter is in further response to the proposed Midpoint, Idaho-Medford, Oregon, Pacific Power & Light Co., 500 KV Transmission Line, DES #76-32.

While the Bureau of Land Management is the lead agency, the Forest Service has participated in the preparation of the Environmental Statement for the proposed powerline from Midpoint to Malin. National Forest lands are crossed by the proposed route and all alternate routes.

As a partner in the Statement, we feel it our responsibility to environmentally rank the proposed and alternate routes from Midpoint to Malin, as to their relative degree of environmental impact.

To facilitate ranking and remain consistent with the Draft Environmental Statement, the attached Evaluation Summary has been prepared. This summary is comparable to Table VIII--79 on page VIII-205 of the Draft ES. We request this letter and matrix appear in Chapter IX of the Final ES and that reference to this letter be made in the summary paragraph of Chapter VIII. The various environmental components have been weighted and scores totalled for easy reference.

The following environmental ranking is designed to provide the reader with a relatively simple comparison of the relative impacts

of each route. The lower the numerical score, the less the magnitude of environmental impact.

Route	Ranking	Weighted Score From Evaluation Summary
Alternate I	1 (Least Impact)	66
Alternate III	2	69
Alternate IV	3	73
Proposed Route	4	80
Alternate II	5 (Greatest Impact)	96

T. A. SCHLAPFER
Regional Forester

Enclosure

EVALUATION OF UNAVOIDABLE IMPACTS -- PROPOSED AND ALTERNATE ROUTES
500 KV TRANSMISSION LINE -- MIDPOINT TO MALIN

	Importance to Decision Making		Proposed Route		Alternate I		Alternate II		Alternate III		Alternate IV	
	Descriptive Ranking	Weight Factor	Ranking	Weighted Ranking	Ranking	Weighted Ranking	Ranking	Weighted Ranking	Ranking	Weighted Ranking	Ranking	Weighted Ranking
Mileage	High	(3)	391.0 Miles		441.5 Miles		411.0 Miles		429.0 Miles		449.0 Miles	
			1	3	4	12	2	6	3	9	5	15
Mileage of Existing Parallel Right-of-Way	High	(3)	40.0 Miles		152.5 Miles		97.0 Miles		91.5 Miles		148.5 Miles	
			5	15	1	3	3	9	4	12	2	6
Air Quality	None	---	---	---	---	---	---	---	---	---	---	---
Geology and Topography	None	---	---	---	---	---	---	---	---	---	---	---
Soils	Medium	(2)	1	2	2	4	5	10	3	6	4	8
Water Resources	Medium	(2)	1	2	2	4	5	10	3	6	4	8
Vegetation	Medium	(2)	5	10	1	2	4	8	3	6	2	4
Wildlife	High	(3)	5	15	4	12	3	9	1	3	2	6
Horses	Low	(1)	1	1	2	2	3	3	5	5	4	4
Archaeology	High	(3)	Data Incomplete or not Available									
History	Medium	(2)	3	6	1	2	4	8	2	4	2	4
Aesthetics & Recreation	High	(3)	3	9	4	12	5	15	1	3	2	6
Land Use	Medium	(2)	2	4	5	10	4	8	1	2	3	6
Economics	Low	(1)	3	3	1	1	4	4	5	5	2	2
Social	Medium	(2)	5	10	1	2	3	6	4	8	2	4
Weighted Totals				80		66		96		69		73

Route with least impact is rated as 1 with others rated 2 to 5 in ascending order of impact
(1 least impact; 5 highest impact)

Department of
Fisheries and Wildlife

Oregon State University

Corvallis, Oregon 97331 (503) 754-1531

30 October 1976

Oregon State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

131

SUBJECT: Comments Concerning the Draft Environmental Impact Statement for Pacific Power and Light Company's Proposed 500 KV Powerline Midpoint, Idaho - Medford, Oregon

Ladies and Gentlemen:

I shall be restricting my comments regarding the DEIS to two areas of concern: (1) fish and aquatic habitats; and, (2) paleontological resources.

Presentation of DEIS

First, I should like to comment on the presentation of the DEIS. In a number of sections throughout the report, reference is made to 'rough' fish (e.g. II-64, II-70). This term should not be used as it is unnecessary and conveys misinformation to the public and the uninformed professional. These fishes are a vital part of a healthy aquatic community and professional societies (including the American Fisheries Society) have condemned the use of the term. The term 'non-game' should be used when discussing these fishes as it more adequately and more correctly describes them.

Throughout the report there are misspellings of common and scientific names of fishes. Although Bailey et al.(1970) and Bond(1973; see Literature Cited in DEIS) were used as a guide in writing the DEIS, they were apparently not followed as closely as they should have been. Improper spelling and editorship detracts from the professionalism and credibility of the DEIS. A list of misspellings will be furnished upon request.

Table II-14 supposedly identifies major fish species commonly found in the area to be crossed by the proposed transmission line. It does not. It identifies only the families and the number of species in each family. It should identify the species, as this would be of much greater value. Certain fish species in the area are unique(endemic) to Oregon and should be indicated as such. A list of unique species will be furnished upon request.

276

Table II-24 is useless as concerns fishes because it conveys little information. In addition, although the Warner sucker is included as an endangered species, the shortnose sucker is not included on the list. Detailed comments concerning this table will be furnished upon request.

Table V-4 lacks all information relating to the unavoidable impact to fishes of the proposed project. This, I assume was an oversight.

Interest Groups

On page IX-5 of the DEIS are listed interest groups that were tc be contacted concerning a review of the DEIS. I believe that one or all of the following (or their representatives) should be notified regarding comments: (1) Oregon chapter of the American Fisheries Society; (2) American Society of Ichthyologists and Herpetologists; and, (3) Desert Fishes Council. The first two organizations are professional societies and the third is a special interest group, concerned mainly with fishes of the Great Basin and deserts. A portion of the proposed transmission line passes through the Great Basin. These organizations can provide valuable and necessary imput. Their addresses will be furnished upon request.

Rare and Endangered Fishes

Another major error or oversight in the DEIS concerns rare and endangered fishes in Oregon. Although Bond(1966) is cited in the draft, the report by Bond on rare and endangered fishes of Oregon has been revised (November 1974) yet the revision is not mentioned. This revision contains much more information concerning Oregon fishes. Many of the fishes located in the region of the proposed routes are included in this revision. While not all the fishes in the region of concern are endangered, many are unique and/or rare due to extremely limited distributions and because of this are potentially quite vunerable to alterations in habitat. The need for their realization and consideration in the EIS cannot and should not be ignored. This is a major criticism of the DEIS. A copy of the latest revision of the report on rare and endangered fishes of Oregon will be furnished upon request.

Little Consideration and Adverse Impact

It is apparent that fishes have received little consideration in the DEIS. In Chapters VI, VII, and VIII little or no mention is made in reference to fishes. Numerous tables captioned 'Unavoidable Adverse Impacts on Wildlife Habitat' do not present anything regarding fishes. Fishes and the aquatic habitats in much of the region of the proposed line could be subjected to the most adverse impact - total loss. Some of the fishes inhabiting these aquatic habitats are unique to a very small area. These habitats are analogous to islands, once the fauna is lost it cannot be brought back. Research by Fred T. Bills (Dept. of Fisheries and Wildlife, OSU, Corvallis) on certain chubs (Cyprinidae:Gila) in South-Central Oregon indicates these small restricted populations are distinct from each other and worthy of being designated subspecies. As such, these fishes can be considered rare and vunerable.

Mitigating Measures

This section's comments apply to mitigating measures but have direct relevance to all portions of the proposed project. A critical potential problem to fishes and aquatic habitats is siltation. This will be the result of construction activities , especially road building. Very little attention is directed toward the literature concerning siltation and its effects on aquatic habitats and fishes. Although mitigation measures specifically take this problem into account, the interpretation (and subsequent implementation) may be vague. BLM Mitigation Measure 10 (p.IV-8) states '...maximum use of existing roads...'. How is maximum measured? BLM Mitigation Measure 16 and 17 (p.IV-10) discuss the use of temporary culverts and bridges. What about stream crossings that are not temporary? If there are no permanent crossings, it should be so stated. How and by whom is the decision made concerning when to use a culvert and when to use a bridge? Removal of culverts may do more damage than if left in place. This can only be determined by specific on-site evaluation. Who is responsible for the evaluation or is there no evaluation?

BLM Mitigation Measure 31 deals with road and trail construction in a specified list of sensitive areas. To this list should be added all aquatic habitats. These are sensitive areas and should be considered as such. BLM Mitigation Measure 38 stipulates certain measures to be taken concerning springs and seeps but does not stipulate measures concerning other aquatic

habitats. This measure should be expanded to include the stipulation that staging sites, construction camps and the like should not be located within a specified distance (500 ft.) from any aquatic habitat (seep, spring, creek, lake, etc.). Additional mitigating measures should be included that would provide for more control over the areas from which water would be sought for the 'watering-down' of dusty roads. Careful thought in these mitigating measures will help to reduce the adverse impact.

BLM Mitigation Measure 32 is good but should be expanded to include to include a competent ichthyologist or fisheries biologist as an advisor and consultant. Unique and unforseen problems dealing with fishes and aquatic habitats can only be realized and solved by such a professional. This person could and should conduct an inventory similar to the botanical inventory outlined in BLM Mitigation Measure 4. Optimum mitigating measures regarding the adverse effects of the proposed transmission line on aquatic habitats can only be realized when the precise location of all land disturbing activities are known. Inventory and a monitor program is needed and should be conducted prior to, during and after construction. This can only be done properly by a competent ichthyologist or fisheries biologist.

BLM Mitigation Measure 34 pertaining to threatened species should include consideration of the threatened fishes found along the proposed routes. Siltation appears to have its greatest impact on the egg and early life stages of fishes (see Cordone and Kelley 1961; incorrectly cited in the Literature Cited of the DEIS, it is Vol. 47, No. 3, not No. 2). Special care should be accorded the threatened fishes just as equally as the other threatened species.

PP&L Mitigation Measures

I am confused by some of PP&L's Specific Mitigation Measures. Measure 7 under Land and Water Resources states 'Herbicides, pesticides, or defoliates on the right of way will not be used.' Further, Measure 12 under Other Measures states 'All applicable federal, state and local laws and regulations concerning use of pesticides ... will be complied with.' There is gross conflict between these statements. If they state that pesticides will not be used, they should be held to that.

Paleontological Resources

Throughout the DEIS, specific mention is made concerning archeological sites and resources but little or no mention is made of paleontological sites and resources. These are valuable resources that are disappearing at an alarming rate and they should not be ignored. Comments should be sought from the U.S. Geological Survey and an organization such as the Society of Vertebrate Paleontologists. Although sites and resources may be considered under the general topic of archeology or prehistorical resources, this should be so stated. Paleontological inventory should be conducted along with archeological inventory. Paleontological sites are known to exist in the region of the proposed or alternative routes. References pertaining to these sites will be furnished upon request.

It is apparent throughout the DEIS that fishes, aquatic habitats and paleontological resources have been ignored. Whether this was intentional, due to an oversight or due to a lack of information is not an issue. The important point to be made is that the necessary and correct information should be sought from the proper individuals. Certain mitigating measures as outlined above need to be expanded to include fishes, aquatic habitats and paleontological resources. Any help that I can provide is offered to the upmost of my ability.

Respectfully,

Kevin M. Howe

Kevin M. Howe
Graduate Research Assistant

cc: Dr. C.E. Bond
Dr. M.C. McKenna
Oregon Dept. of Fish and Wildlife
Oregon Public Utilities Commission
Oregon Environmental Council
Oregon Chapter, Sierra Club
Oregon Chapter, Audubon Society
Desert Fishes Council

October 28, 1976
Lakeview, OR 97630

Mr. Murl Storms
State Director
Bureau of Land Management
729 N.E. Oregon Street
Portland, OR 97208

132

Dear Sir:

We have had an opportunity to further review the BLM Draft Environmental Statement for the 500 KV Transmission Line proposed by Pacific Power and Light Company. We offer the following comments in addition to the statement written jointly by the Lakeview Town Council and the Town Planning Commission and presented at the hearing in Lakeview on September 28, 1976.

The EIS states that the line would be located four miles from Lakeview (EIS Ch. II, 166). This distance is apparently measured from the highway junction in the center of town. The area along Highway 395 between the edge of town and the proposed line is presently quite heavily populated. There are 65 homes, nine businesses and two churches now. Of these 65 homes, seven are either just completed or in the construction stages. A proposed sewer extension to this area will attract further development.

The EIS does not reflect that a high voltage line constructed on the proposed location would become a restrictive barrier to further expansion of the community. The recent growth of our town has been to the north rather than any other direction. The available area to the south is a narrow corridor restricted by swampy ground. Likewise, the area to the west is limited to construction activities because of a high water table. The Warner Mountains to the east restrict extensive development in this direction.

The proposed adjustment in the line location (EIS Ch. VIII, 242) as shown in green on the attached map, was proposed as a more favorable alternative in a letter dated October 15, 1976, to Dave Cavaya, Pacific Power and Light Company, Lakeview. Upon further investigation, we found a conflict to this route which was not addressed in the EIS. The Lakeview - Thomas Creek Water Control District has proposed the Cox Creek Reservoir Project. If constructed, this reservoir would attract considerable numbers of recreation visitors and probably yearlong residents.

These items, coupled with the visual impacts from the Warner Canyon Ski Area, lead us to the conclusion that any power line on the Goose Lake Valley floor would be detrimental to the living environment of its residents and would result in a barrier to logical expansion and growth of our community.

Respectfully submitted by the Lakeview Planning Commission.

Robert Bl[illegible], Chairman

Sandra Ann Cirk

James T. Hunt



by Ansel Adams in *This Is the American Earth*

SIERRA CLUB

OFFICE OF THE NORTHWEST REPRESENTATIVE

4534½ University Way, N. E.
Seattle, Washington 98105
(206) 632-6157

November 1, 1976

Oregon State Director
Bureau of Land Mangement
PO Box 2965
Portland, Oregon 97208

133

Dear Sirs,

We feel that your draft environmental impact statement on the Proposed PP&L 500 kV Powerline Midpoint, ID-Medford, OR is inadequate in several major areas. We have enclosed some relevant materials for your inspection that we believe states our case in a defensible manner. We urge you to use similar material in any further work on this DEIS. We feel that you should undertake the preparation of a new DEIS including a major upgrading of the sections on the need for the proposed action and that of alternatives to the action. The following is a general discussion of those two sections of the DEIS.

Purpose and Need I-7 to I-17

It is most important to divide the need question into several parts. Each of these parts needs to be examined as a separate question. It is most difficult in the present DEIS to answer these questions to one's own satisfaction.

1) Does the Pacific Northwest need the power for load growth within the region? Any use of the West Group Forecast should be tempered with the criticisms of that forecast which are easily obtained. There are also several other load forecasts available. They have been produced by the Oregon Department of Energy, Washington State University, and the Northwest Energy Policy Project. We have enclosed several items which discuss some of the criticisms directed towards the WGF. The information presented in the DEIS is not currently adequate for the reader to base a decision on.

2) Is the power needed in Southern Oregon? The information in the DEIS does not conclusively demonstrate this need. An excerpt of the Oregon PUC hearing has been enclosed. The BLM should discuss such points in the DEIS as Mr Nadal discussed in his testimony. There appear to be several points of controversy that need a more adequate explanation. It must be noted that the benefits of supplying power to Southern Oregon are not specifically related to the proposed powerline. Any line that could supply power would provide benefits to Southern Oregon.

A conservation program also could provide Southern Oregon with the same benefits as a powerline without any of the attendent environmental impacts.

3) Is this route needed for future expansion of transmission above and beyond this initial line? It appears that the applicant feels that this proposal is not merely an application for a single 500kV line but it is really a new power corridor that will be heavily used. ("the other lines would be phased out and transferred to the new location", Idaho Statesman 9/8/76) We feel that if this is the case then any DEIS on this project should discuss that liklihood. What are the probailities that Southern Oregon load centers will begin to predominate the loads of Puget Sound and the Willamette valley? Will most of the new generation be located on this new power corridor? What will be the environmental impacts of this proposal? BPA has remarked that the need for a powerline across Southern Idaho and Oregon is dependent on the development of thermal generation near Boise and the amount of this power that could be scheduled west to Oregon. Recently, the Idaho PUC rejected an application to build this thermal generation in its statement the PUC stated that there was no near term need for the huge 1,000 mw plant and that much smaller amounts of power would be needed a much later date than first proposed. It appears that there will not be much thermal generation for transmission to Oregon from the Boise area. How has this decision changed the need for the proposed line? With the rejection of PP&L's Colstrip 3&4 what is the likelihood that this Wyoming Power will be used in Montana?

Alternatives to the Proposed Action VII

The discussion should center itself upon which actions would require the minimal establishment of new power corridors. This DEIS does not adequately do this.

The minium program that is necessary is that of an energy conservation program. This plan would increase the efficency of energy use not limit its consumption. It has become obvious that various conservation plans will be implemented in the Northwest and that these will reduce the need for new transmission corridors. The DEIS discusses "limiting the consumption of electricity". A discussion of energy conservation needs to be more complete and must discuss more innovative plans. We have enclosed a short summary of a conservation study funded by BPA. This type of material could go directly into the DEIS.

The second best alternative would be to upgrade the existing corridors or use existing lines wherever possible. This alternative has been virtually been ignored in the current DEIS. A few alternatives such as these wer discussed in PP&L's environmental assement of May 1975. However recent information has raised questions as to the validity of PP&L's objections to alternatives. (note the discussion of alternatives in the Oregon PUC testimony) A complete discussion of all of the alternatives needs to be included in a new DEIS.

In summary, we feel that the DEIS is inadequate as it does not supply much needed information that is required if the readeris to make an informed decision. The section on the need for the proposed action draws possibly inaccurate information and assembles it in a manner that is confusing at best. The section on alternatives does not "permit a reasoned choice of alternatives" (NRDC v. Morton, 1972). We would be glad to provide assistance in writing a new DEIS. We would alsc be glad to provide a more detailed discussion of the points that we have raised. We urge you to re-write the DEIS and issue it again as a new DEIS.

Sincerely,

James T. Blomquist

James T. Blomquist, Staff Assistant

Enclosed: BPA letter 3/10/75
Idaho Statesman 9/8/76
Conservation Study by BPA
Nadal Testimony 11/15/75
Colburn Testimony 12/75
Brewer paper

United States Department of the Interior

BONNEVILLE POWER ADMINISTRATION
P.O. BOX 3621, PORTLAND, OREGON 97208

OFFICE OF
THE ADMINISTRATOR

NOV 2 1976

In reply refer to: AJ

138

Memorandum

To: State Director, Bureau of Land Management, Portland, Oregon

From: Administrator

Subject: Midpoint-Medford Draft Environmental Impact Statement

We appreciate the opportunity to review this draft EIS. Your staff has addressed an unusual and difficult challenge in a professional manner. The following comments are based on our analysis of the specific subject matter as presented.

The statement is well defined and detailed in the soils and wildlife areas.

Bonneville Power Administration recognizes that there is urgent need for additional transmission capacity between the coal-fired generation in Wyoming and Pacific Northwest loads. There is also a need to upgrade transmission capability of the system serving Pacific's Southwest Oregon load. Both of these needs are satisfied by the proposed Midpoint-Medford line.

As part of the background for the line itself, it should be emphasized that the proposed line will become part of the transmission grid system of the WSCC.

In general, the EIS treats the proposed line as a separate transmission line external to the existing system. The proposed line will, however, become a part of the total transmission network. While the impacts for the line will not change because the line is part of the transmission grid, the need for the line must be determined in the context of the entire grid system.

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Memo to State Director, Bureau of Land Management, Portland, Oregon; Subj: Midpoint-Medford Draft Environmental Impact Statement

PP&L has requested an interconnection between the Midpoint-Medford line and the PNW-PSW Intertie at Malin. While we have not yet reached agreement with PP&L, we are continuing our negotiations with the company regarding the operation of the proposed interconnection and possible marketing arrangements. In the absence of suitable arrangements the line may not be compatible with Federal power marketing programs. However, we expect to resolve any outstanding issues in an expeditious manner.

Under the section entitled "Applicant's Proposed Action," it would be helpful if the current anticipated dates for land acquisition, start of construction, and line energization were clearly supplied.

We prefer that BPA not be referenced or quoted as on pages I-26 and I-39.

Some mention could be made of construction and routine maintenance measures needed to avoid conflict with the critical antelope and deer fawning and migration times that occur in specific areas along the route.

We note that the statement does not include any analysis of the current off-road vehicle trail system in the area. Without the reflection of an analysis of ORV trails, there is no apparent basis for comparing impacts of present and future conditions.

In comparing the "ratings" of the various alternatives in the summary-analysis tables beginning on page VIII-197 with the "ratings" of the VTN (Voorheis-Trindle-Nelson) report for PP&L, it appears that some method other than a 1-2-3-4-5 ranking is needed. The way the tables are presented would imply that a ranking judgment could be derived from an addition of the ratings for various impacted features. Such an addition gives extremely misleading results.

Soil losses appear to be clearly overstated. Plants and animals inventoried apparently include a large listing of typical types of vegetation and wildlife extending from antelope to yellowstone cutthroat trout and includes several species of insects. On the other hand are the

indications that clearing would be limited to a maximum 175-foot width, which seems rather narrow considering the height of conifers passed through in some areas. Stringing pads are also indicated to require a total of three acres of vegetation removal for the entire line. This seems low for 500-kV stringing equipment.

Page I-1 Second paragraph, line 3. Change sentence beginning: "To do this, ..." to "Since Pacific has insufficient transmission capacity from Wyoming to the Northwest to transmit this power, they propose to construct a new 500,000-volt powerline between the Midpoint, Idaho, Substation and a proposed new substation near Medford, Oregon."

Page I-11 Sixth paragraph, last sentence. Within the existing Pacific Northwest grid the proposed line will not normally transmit the 1000 MW from Wyoming to the Northwest. A more correct statement would be to say "...increase to approximately 1000 megawatts by 1979 (Figure I-6). With the addition of the Midpoint-Medford line, the overall transmission capacity between Idaho and the Northwest will be adequate to transfer this power."

Page I-14 Table I-3 is no longer current. A revised schedule from the most recent Pacific Northwest Utilities Conference Committee (PNUCC) published data should be substituted.

Page I-17 The text states that Pacific will have 1000 MW of "surplus Wyoming power" available in 1979 to be transmitted over the line. It would be more accurate to say that this power would be transmitted over transmission facilities owned by Pacific or in which the company has rights between Wyoming and the Northwest. This would include the Midpoint-Medford line.

In this same paragraph, the section of this sentence "diverted into the existing 500-kV intertie at Malin and" should be deleted as being too restrictive to the manner in which the power will be used in the Pacific Northwest.

It has been stated in other publications (e.g., the PNUCC "blue book") that Pacific has scheduled 2/3 of Jim Bridger

(1333 MW) to the West Group plus some other Wyoming generation. No explanation is given for the difference between this and the 1000 MW previously listed.

The term "surplus Wyoming power" is misleading in that it connotes generation developed without a specific need. In actual fact, this generation represents a firm power and energy source scheduled to the West Group area. It is surplus only to the Wyoming area, the generation being located in Wyoming because of the fuel source being there.

Page I-26 The average weight of a tower of 17,000 pounds for BPA towers is not applicable because of the greater height required for the greater sag on the PP&L line.

Page I-31 The third paragraph refers to a spacing of 18 inches, in triangular configuration. This is not consistent with figure I-12. It could be changed to read "...with a triangular configuration as shown in figure I-12."

Soils - Table III-3b & III-4b, pages III-12 and III-14

The potential soil loss due to operation and maintenance is based on a loss rate assuming a continuous ten-foot wide road would remain bare for the life of the project. This assumption should be indicated under the Soils Section as well as under the Vegetation Section on page III-28.

Page III-31 The two sentences under "Toxic Emissions" are contradictory. The first says that EHV lines can produce above normal amounts of oxidants which can adversely affect plants. The second says "no data could be found to document that 500-kV lines (considered EHV) produced oxidants in amounts sufficient to damage plants." The second sentence is the conclusion we have reached based on extensive research and experience.

Page III-42 The study by Goodwin (1974), which is cited elsewhere in this draft, is especially pertinent to the discussion on the effects of noise on wildlife and should be cited here. Goodwin found no significant indications that the audible noise (of up to 68 dB (A)) of a transmission line caused wildlife to avoid the right-of-way.

Memo to State Director, Bureau of Land Management, Portland, Oregon; Subj: Midpoint-Medford Draft Environmental Impact Statement

Page III-51 We know of no basis whatever for the statement that "The corona effect on migrating birds could cause some disruption or change in migrating patterns."

Page III-116 It is noted that the locating of 50 to 100 persons in Lakeview or Burns, or locating even smaller numbers of people in other towns along the route, would cause adverse effects because of the overloading of stores and services. This does not appear to be in keeping with the nature of the towns along the route. Most of the communities in southern Oregon are oriented to major increases of population during specific times of the year. During the period in which BPA crews were in Lakeview, we were advised that it is normal for 5,000 to 6,000 hunters to converge on the area during the goose and big game seasons. In the tourist season, all of the communities experience short-term effects from an increase in the region amounting to several hundred tourist visits per week. Since these communities are oriented toward such increases, it does not appear that the impacts would be "adverse" as described in the draft statement.

Table IV-1, page IV-20

The projected reduction in potential erosion does not correlate with potential soil loss Table III-7. Table III-7 shows potential loss from construction of 14,961 tons and from maintenance of 198,585 tons. Table IV-1 shows reduction in soil loss due to construction of 128,380 tons and due to maintenance of 12,697 tons.

Agriculture, page V-13

In the second paragraph the statement "Sprinkler irrigation could not be carried out under the transmission line" should be changed to read "Sprinkler irrigation systems may require modifications when crossed by the transmission line." Sprinkler systems are being operated under 500-kV lines.

Page VIII-222, Bottom. The statement which credits all large modern fossil plants with an achieved efficiency of 38 percent, may overstate the efficiency of such plants utilizing the low-sulphur Western coals.

Memo to State Director, Bureau of Land Management, Portland, Oregon; Subj: Midpoint-Medford Draft Environmental Impact Statement

Page VIII-235 It is stated that it may be possible to upgrade or replace existing facilities which would eliminate most environmental impacts. This would eliminate impacts only for the proposed Midpoint-Medford line route since a different line would be constructed in another area. To determine if the impacts would be more or less, would require an additional EIS on the alternate. The construction of a line on an existing corridor does not automatically mean no impact.

In this same section, delete the word "excess" from the first sentence "...within the grid system do not have the excess capacity required...."

Donald Paul Hodel

321

Harry L. Silcocks
1143 Lambaren Ave.
Livermore, Ca 94550
September 29, 1976

Office of Public Affairs
Bureau of Land Management
Washington, D.C. 20240

146

Gentlemen:

I would at this time like to comment on the draft environmental impact statement "Proposed Midpoint, Idaho-Medford, Oregon Pacific Power & Light Co. 500kv Transmission Line." Since this EIS failed to mention where to mail comments, I have addressed my comments to your department with the hopes they will be forwarded to the correct department.

In those areas where either threatened-endangered birds or large concentrations of other birds occur, the placement and design of individual towers should be such that the towers and lines present the least hazard to birds. This requirement should be enforced in these areas even though visual requirements may not be met. Where the option is either bird protection or visual protection, birds should come first! This same requirement should be enforced in known feeding areas.

The final route should attempt to avoid wildlife refuges, threatened-endangered species, waterfowl areas and most importantly the Snake River Birds of Prey Natural Area.

Would it be possible to consider the building of alternate nest sites away from the line so that the hazard from shooting might be reduced. If nests are built in the towers will they be destroyed?

On page III-43, a brief reference to electrocution appears. The statement indicates, at least to me, that bird electrocution could occur, that the placement of the lines does not insure protection to large raptors. I would like to suggest that it be made mandatory that the line be designed so as to prevent raptor losses from electrocution. Since raptor losses due to electrocution are significant, one paragraph seems hardly sufficient to explain the problem and to state in a positive manner what can and will be done to prevent occurances of this type from happening on this particular line.

ORVs will cause many problems after the line is built. Has the installation of various types of physical barriers been considered? The Bureau of Outdoor Recreation has recently issued a draft EIS pertaining to off-road vehicles on public lands. Would it be possible to discuss the problems caused by power line construction and relate these problems to the proposal by the Bureau of Outdoor Recreation in their draft EIS? Would it be possible to designate those areas that will present problems as "closed"? The many problems caused by ORVs has been noted in this EIS, the next step is to solve those problems!

sincerely yours,

Harry L. Silcocks

Rogue Valley
Water Users
Association

POST OFFICE BOX 467
TALENT, OREGON 97540

October 12, 1976

U. S. Bureau of Land Management
Murl Storms, Oregon State Director
P. O. Box 2965
Portland, Oregon 97208

28

Attn: John Lampkin, Hearing Examiner

Dear Sirs:

The Rogue Valley Water Users Association would like to comment on the B.L.M. Draft Environmental Impact Statement regarding the Pacific Power and Light Company's proposed 500 K. V. powerline from Midpoint, Idaho to Medford, Oregon. We are taking this opportunity to send in our written comments prior to the October 15th cut-off date that was announced at the Medford hearing on September 27, 1976.

We have examined the draft statement and feel that every environmental concern has been examined and the possible effects have been noted. The environmental safeguards proposed in the statement, in addition to the safeguards that were outlined by Pacific Power and Light Company, would seem to be more than adequate.

The Pacific Power and Light Company's proposed route would appear to be the most satisfactory, both environmentally and economically, over the proposed alternate routes listed. The need for the additional power in Southern Oregon has already been demonstrated.

We wish to refer to the many environmental gains that our valley and Southern Oregon, as a recipient, will receive from the clean electric energy that will be transported into the basin. Recent developments in sprinkler application of water for frost control and irrigation requires approximately one half the water used in flood irrigation and improves the water quality of our streams. This use of water eliminates the burning of petroleum products for frost control and does not contribute to smoke production. The forest industries could utilize electric energy to operate the chippers, debarkers, etc. rather than using wigwam burners. Electric energy could also be used to run the many pumps that upgrade our sewage control systems. These are but a few reasons why we urge early approval and early completion of the line to insure adequate supplies of energy for our valley which we vitally need to insure the total utilization of our food producing land.

Very truly yours,

W. H. Hoffbuhr

W. H. Hoffbuhr
Secretary-Treasurer

Dear State Director -

Yes, I am in favor of a PP&L power transmission line through Lake County--but, I am opposed to the Prime Route of the Pacific Power and Light transmission line because:

1. It opens up more new country than either of the Alternate Routes.
2. It does not take advantage of existing corridor, i.e. the corridor running from Beatty north.
3. It runs too near Goose Lake Valley and the north end of the Town of Lakeview.
4. It runs through more heavily populated wildfowl and game lands than either Alternate Route Number One or Three.
    a. Goose Lake Valley
    b. The Narrows (200,000 wild fowl at peak season-Fish and Game count).
    c. Beatty Butte (over 700 wild horses, deer and antelope summer and winter range-Fish and Game figures).
    d. Drake's Flat and Beatty Butte (sage grouse strutting grounds) note: These figures were not in the Environmental Impact Statement.
5. It runs through or near Booth Park, Warner Ski Area and Camas Flat.
6. It will pose a danger to pilots and small craft which follow the highway in from the north and west in low visibility weather conditions.
7. It runs over the historic site of The Old Stone Bridge and Indian petroglyphs at the Narrows, between Hart and Crump Lakes.
8. It will permanently and radically devaluate any property through or near which it runs.

I am in favor of Alternate Route Number One because:

1. The revenues for Lake County derived from Alternate Number One would be essentially the same as those derived from the Prime Route (Sec. VIII-40 EIS Statement).
2. It coincides with the route endorsed by the Boise District Fish and Game Department, the Boise District BLM, the Idaho Water Resource Department, and the United States Air Force.
3. It uses existing corridors.
4. It runs through area less inhabited by wildlife than the Prime Route and opens up far less new country.

Mrs C. Stone Platt
Lawrence T. Platt

October 25, 1976

112

Dear Director,

I am writing you to express my unqualified opposition to the construction by Pacific Power and Light Company of a 500 KV Transmission Line across BLM lands from Midpoint, Idaho to Medford, Oregon. I dont care what route the line takes, I dont want it built!

I question the need for additional electricity in southwestern Oregon. Medford has already approached the limits of expansion in that valley. We need that valuable cropland to remain intact and not become rows of suburban housing. Limiting electricity will limit growth and that is what we have got to start doing!

The proposed PP&L route as well as the 4 alternative routes would ~~do~~ incalculable damage to the Pacific flyway of migratory water fowl, all routes detract greatly from the scenic beauty and wilderness potential of the roadless lands they would cross. Construction access roads would bring about illegal shooting of raptors, legal & illegal big game hunting, dissociation of archeological sites & increased ORV use (heaven forbid!). I detest the visual intrusion of these lines and the constant buzzing & crackling that they produces and I am sure that the lines do nothing for animal habitat. There are incredible numbers of beautiful, sensitive areas which would be defiled if this line was constructed. Do not build it! We do not need it!

Sincerely,

Ned Dunkrack

LITERATURE CITED

Anderson, W. L., Hurley, S. S. and Seets, J. W. Waterfowl studies at Lake Sangchins. Illinois Natural History Survey, Urbana, 1975

Arend, P. H. The Ecological Impacts of Transmission Lines on the Wildlife of San Francisco Bay. Prepared for Pacific Gas and Electric Company, 1970.

Bailey, Reeve M., et al. A List of Common and Scientific Names of Fishes from the United States and Canada (Third Edition).

Bailey, V. The Mammals and Life Zones of Oregon. North America Fauna No. 55, USDA Biological Survey, Washington D.C. 416 pp., 1936.

Bertrand, A. B. and M. A. Scott. Check List of the Birds of Oregon. Oregon State University Book Stores, Inc., Corvallis, Oregon, 1971.

Bollinger, W, LaMar. The Economic and Social Characteristics of Idaho's Adult Population Focusing on Recent Immigrants and Returnees, College of Idaho, February, 1972.

-----Unpublished personal income data from Idaho. College of Idaho.

Bond, C. E. Endangered Plants and Animals of Oregon - I. Fishes. Special Report 205, Agricultural Experiment Station, Oregon State University Corvallis, Oregon, January, 1966, and revised November 1974.

Bond, Carl E. Keys to Oregon Freshwater Fishes. Technical Bulletin 58 (Revised), Agricultural Experiment Stat., Oregon State University, Corvallis, Oregon, January, 1973.

Bonneville Power Administration, Electrical Effects of Transmission Lines. September 1975.

Chambers, Kenton L. Working Draft, Rare and Endangered Plants of Oregon. Oregon State University, Corvallis, OR, 1974.

Cordone, A. J. and Kelley, D. W. Influence of Inorganic Sediment on the Aquatic Life of Streams. California Dept. of Fish & Game, Vol. 47, No. 3, 1961.

Crump, L. H. and C. L. Readling. Fuel and energy data, United States, by states and regions, 1972. U.S.D.I., Bureau of Mines Information circular 8647.

Ellis, D. H., Smith, D. G., Murphy, J. R. Studies on Raptor Mortality in Western Utah. Great Basin Naturalist 29 (3), 1969.

Franklin, Jerry F. and C. T. Dyrness. Vegetation of Oregon and Washington, U.S.D.A., U.S.F.S. Research Paper PNW-80, Portland, Oregon, 1969.

Goodwin, J. Effects of a 500 KV Transmission Line in Elk Movement, Bonneville Power Administration, August 7, 1974.

-----Big Game Movements near a 500 KV Transmission Line in Northern Idaho,' Bonneville Power Administration, 1975.

Hamilton, Joel. Idaho Population: Changes, Density and Migration. Idaho Business and Economic Review, 1971.

Harper, J. The Human Side of Elk. Oregon Wildlife Commission Bulletin 26 (8): 3-6, 1976.

Harrison, J. Heavy Mortality of Mute Swans from Electrocution. Annual Report, the Waterfowl Thrust, 1961 and 1962, 14: 164, 1963.

Harp, J. Personal Communication, California Dept. Fish & Game, 1976.

Hill, A. C., M. R. Pack, M. Treshaw, R. J. Downs and L. G. Transtrum. Plant Injury Indcued by Ozone, Phytopathology, 1961.

Idaho Department of Employment. Basic Economic Data for Idaho. November, 1976.

Idaho Department of Fish and Game. Annual Report, 1973

Idaho Department of Fish and Game. Statement to Senate Resources and Environment Committee Regarding the Endangered Species Act of 1973.

Idaho Department of Water Resources. State Water Plan, March, 1976.

Ingles, L. G. Mammals of the Pacific States. Stanford University Press, Stanford, California, 1965.

Johnston, D. W. andT. P. Haines. Analysis of Mass Bird Mortality in October 1954. Auk No. 74, pp. 447-458, 1957.

Kemper, C. A. A Tower for TV: 30,000 Dead Birds. Audubon 66 (2): 86-90, 1964.

Krapu, G. L. Overhead Wires, A Common Cause of Bird Mortality in North Dakota. U.S. Fish and Wildlife Service, Jamestow, North Dakota, 1973.

Lee, J. M., Jr. Preliminary Investigations of Elk Migration in Relation to Electric Power Transmission Lines. Draft report, Bonneville Power Administration, January 8, 1974.

Lynch, Gary. Estimating Idaho and Reginal Gross Product. Idaho Business and Economic Review, 1971.

Mace, R. U. Oregon's Big Game Resources. Wildlife Bulletin No. 2, Oregon State Game Commission, 1970.

-----Oregon's Pronghorn Antelope. Wildlife Bulletin No. 1, Oregon State Game Commission, 1972 b.

Martinson, R. K. Fish and Wildlife Service, Letter to Bureau of Land Management, Oregon State office, October 1976.

Martinka, R. The New Horizon. Montana Outdoors, July/August 1974.

Mitre Corporation, RALI Report, 1975.

Nelson, M., Eagle Expert, Formerly U.S. Soil Conservation Service. Turdon Films, Personal Communication, Boise, Idaho, December, 1974.

Oliver, W. H. Riparian Lands, Key Habitat for Upland Birds. Washington Department Fish and Game, 1967.

Oregon State Game Commission. A Check List of Oregon Mammals, Amphibians, and Reptiles. 1972.

(1)-- -1 Annual Reports - Fishery Division. 1964-1970.

(2)-- Annual Report. 1974.

(3)-- -2, Basin Investigations: Upper Willamette, June 1966; Powder, August 1967; Malheur, September 1967; North Coast, April 1968 and and Supplement, January 1972; Owyhee, April 1969, Klamath, April 1970 Rogue River Basin, November 1970 and Supplement, April 1972; Goose and Summer Lakes, November 1971, Umpqua, February 1972; South Coast, April 1972; and unpublished reports on John Day and Deschutes.

(4)-- Bulletin, July, 1972.

(5)-- Bulletin, 12 pp., May, 1974.

(6)-- Threatened Species List, 1974

---- 14 River Basin Reports and Annual Reports of the Fisheries Division, 1962-1970.

---- 4, Oregon Game Code, 1973-1974.

---- Oregon Wildlife Commission, May, 1974.

Oregon State University. Resource Atlas for Jackson, Josephine, Klamath, Lake, harney and Malheur Counties in Oregon. 1972, 1973 and 1974.

Oregon State Water Resources Board. Klamath Basin. State Water Resources Board, Salem, Oregon, 1971.

Pacific Northwest River Basins Commission. Columbia-North Pacific Region Comprehensive Framework Study of Water and Related Lands. Vancouver, Washingotn, 1972.

---- Electric Power, Appendix XV.

---- Fish and Wildlife, Appendix XIV.

---- Recreation, Appendix XIII, 1971.

---- Water Resources, Appendix V.

---- Pacific Power and Light Company. Environmental Assessment for Proposed 500 KV Transmission Project, Malin, Oregon to Midpoint,Idaho. 1975, and Malin, Oregon to Medford, Oregon, November, 1975.

Roster, T. Testimony before Oregon Public Utilities Commission, Klamath Falls, 1976.

Scott, R. E., Roberts, L. J. and Cadbury, C. J. Bird Deaths from Power Lines at Dungeness. British Birds Vol. 65 #7, 1972.

Sherer, H. N. and B. J. Ware. Gaseous Effluents Due to EHV Transmission Line Corona. IBBB Journal, May-June, 1973.

Soil Conservation Service, 1967. Report for General Soil Map, Siskiyou County, California. U.S.D.A. Soil Conservation Service, Davis, CA (non-published Report).

Trimble. S., BLM Tech. Note 269 "Non-Game Birds of the West, An Annodated Bibliography".

U. S. Department of Agriculture, Soil Conservation Service. Procedure for Computing Sheet and Sill Erosion on Project Areas. Geology-Technical Release 51, Washington, D.C., 1972.

U. S. Department of Commerce, BEA and ERS, OBERS Projections Series E.

U. S. Department of the Interior - Bonneville Power Administration. BPA Construction and Maintenance Program Environmental Impact Statement, August, 1974.

U. S. Department of the Interior - Bureau of Land Management.

(1)-- Colstrip to Boradview 230 KV Transmission Line, Draft Environmental Impact Statement, 1974.

(2)-- Distribution, Season of Use, and Habitat of the Mammals, Birds, Reptiles, Amphibians, & Fishes of Idaho. 1975. Idaho State Office.

(3)-- Social-Economic Data System, Oregon and Idaho.

(4)-- File Report on Interstate Deer Herd Committee. Bureau of Land Management, Oregon State Office, Portland, Oregon, 1974.

(5)-- Fishes of the Burns District. Bureau of Land Management, Burns, Oregon, 1974.

(6)-- Oregon State Office Supplement to BLM Manual, 7415 - Stabilization Bureau of Land Management, Oregon State Office, 1973.

(7)-- Preliminary Draft, Onshore Oil & Gas Leasing - A Programmatic Environmental Impact Statement, Oregon State Office, 1973.

(8)--Preliminary Draft, Timber Management - A Programmatic Environmental Impact Statement. Washington, D.C., 1972.

(9)-- The Sagebrush-Grass Ecosystem--Description of the Existing Environment, Boise District Office, Idaho, 1974.

(10)- Birds of the Hart Mountain National Wildlife Refuge, Refuge leaflet RL-184-R2-1972.

(11)- Birds of the Klamath Basin National Wildlife Refuge, Refuge Leaflet 104-R5, 1969.

(12)- Birds of the Malheur Refuge, Refuge Leaflet RL-143-R8, 1973.

(13)- Investigation of Bird Migration and Losses Associated with the Omega Navigation Station, Lamoure, North Dakota, Fall, 1973. Federal Aid Report, 1974.

(14)- Threatened Wildlife of the United States. Government Printing Office, Washington, 1973.

Walker and Havens. An Evaluation of the Aesthetic Values as Related to the Water Resources of the Columbia-North Pacific Region. 1973.

Western Systems Coordinating Council. Environmental Guidelines, 1971.

Wilde, S. A. Forest Soils. The Ronald Press Co. New York, 537 pp. 1958.

Wischmeir, W. H., C. B. Johnson and B. V. Cross. A Soil Suitability Normograph for Farmland and Construction Sites. Journal of Soil and Water Conservation, pp. 189-193, September-October, 1971.

Wischmeier, W. H. and D. D. Smith. Rainfall Energy and Its Relationship to Soil Loss. Trans. Am. Geophysical Union 39: 295-292, 1958.

Wise, Michael L. Socioeconomic Effects of Major Construction Activities on Small, Isolated Communities, in Economics of Natural Resources Development in the West. Western Agricultural Economics Research Council, 1974.

Young, L. B. Power Line Pollution - A Hot Issue. Conservation News, National Wildlife Federation, Washington, D.C., 1971.

*These documents are available for public inspection at the following locations:

Malin to Midpoint

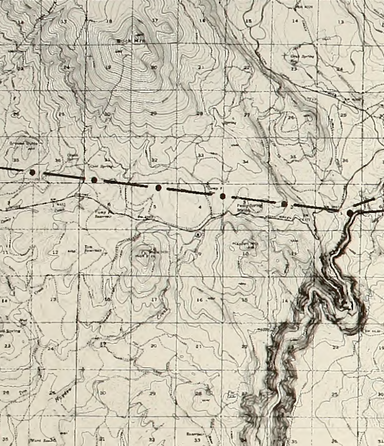
County Libraries: (Oregon) Benton, Clackamas, Harney, Jackson, Klamath, Lake, Lane, Linn, Malheur, Multnomah, (Idaho) Gooding, Jerome, Twin Falls

Public Libraries: Albany, Corvallis, Eugene

Malin to Medford

County Libraries: Jackson, Klamath, Lake, Multnomah
Public Libraries: Albany, Ashland, Corvallis, Eugene, Lakeview

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center



SCALE

0 1 2 3 4 5 6 MILES

MAP - Ba-

MALIN - MEDFORD

APPLICANTS PROPOSED ROUTE
ALTERNATIVE ROUTE II
ALTERNATIVE ROUTE III
ALTERNATIVE ROUTE IV

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center



SCALE

0 1 2 3 4 5 6 MILES

MAP - Ba- I

MALIN - MEDFORD

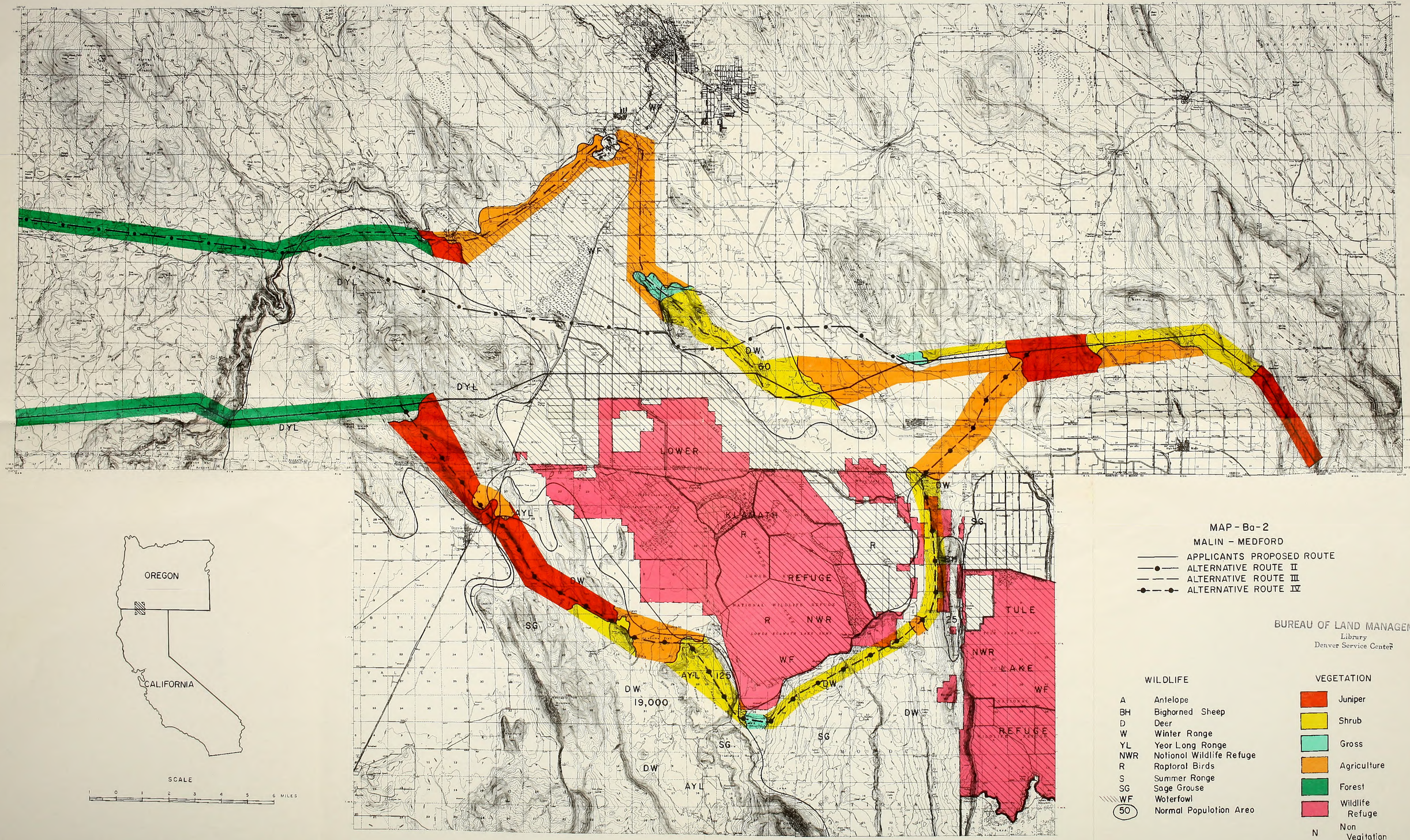
APPLICANTS PROPOSED ROUTE
ALTERNATIVE ROUTE II
ALTERNATIVE ROUTE III
ALTERNATIVE ROUTE IV

SOILS MAP LEGEND

SOIL SERIES

3b Henley
3c Woodcock
5o Nuss
1c Oatman

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center



MAP - Ba-2

MALIN - MEDFORD

APPLICANTS PROPOSED ROUTE
ALTERNATIVE ROUTE II
ALTERNATIVE ROUTE III
ALTERNATIVE ROUTE IV

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center

WILDLIFE

A	Antelope
BH	Bighorned Sheep
D	Deer
W	Winter Range
YL	Yeor Long Ronge
NWR	Notionol Wildlife Refuge
R	Raptoral Birds
S	Summer Ronge
SG	Sage Grouse
WF	Woterfowl
(50)	Normal Populotion Areo

VEGETATION

	Juniper
	Shrub
	Gross
	Agriculture
	Forest
	Wildlife Refuge
N	Non Vegitation



SCALE

0 1 2 3 4 5 6 MILES

MAP - Ba-3

MALIN - MEDFORD

APPLICANTS PROPOSED ROUTE

ALTERNATIVE ROUTE II

ALTERNATIVE ROUTE III

ALTERNATIVE ROUTE IV

SCENERY CLASSIFICATION

A = 15-24 High Scenic Volue

B = 10-14 Moderate Scenic Volue

C = 1-9 Low Scenic Volue

Recreation Site

Historical Site

Troil

Sensitivity Level 1

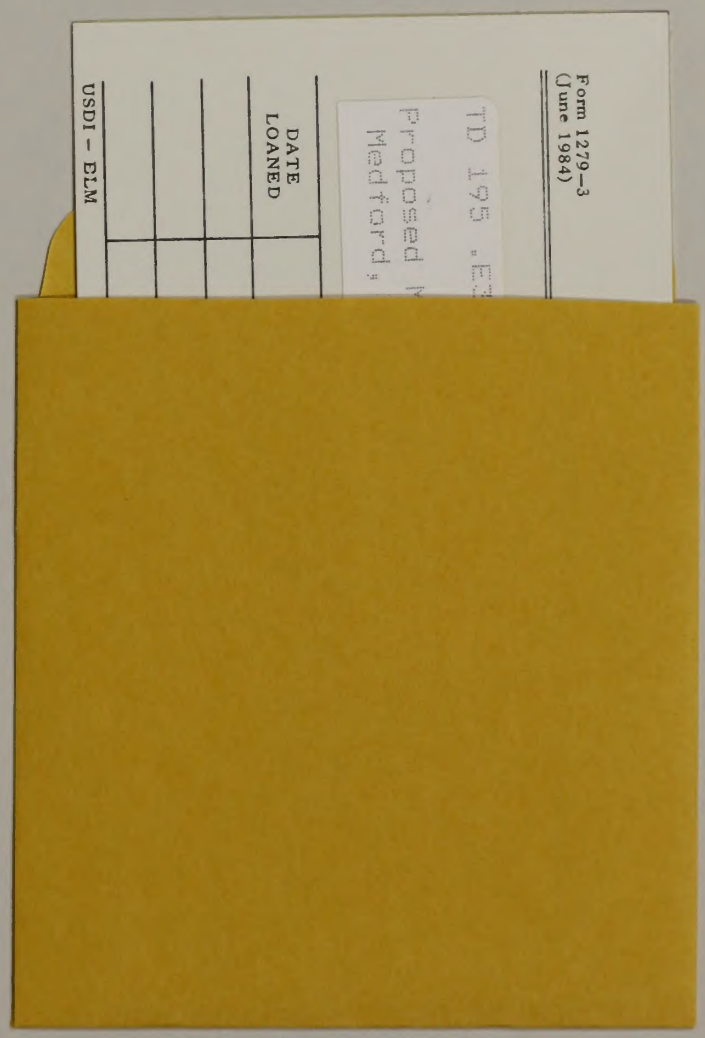
Sensitivity Level 2

Sensitivity Level 3

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center



U.S. GOVERNMENT PRINTING OFFICE: 1977—774-511